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The Bank is not necessarily in agreement with the views expressed in articles appearing in this Review. They are published in order to stimulate free discussion and full inquiry.

The "Norman Conquest" Reconsidered

By Sir Theodore Gregory

I

LORD Norman died in February, 1950, having "attended the Bank Court for the last time on 13 January 1944." With commendable promptitude, Sir Henry Clay began work upon this book[1] in May, 1950, "at the request of the Court of the Bank of England and of Lord Norman's family". He had been "an intimate adviser of Lord Norman at the Bank from 1929"; he was a much-loved and respected figure in professional economic circles before then and was to become Warden of Nuffield College subsequently to his departure from the Bank of England. Clay was not a "monetary economist" in the narrow sense of that term; he could therefore write this book without fearing that any opinions he chose to express in it might bring upon his head the charge of inconsistency or of time-serving. His unfortunate accidental death in 1954 meant that this work, though appearing under his name, is not entirely as he left it: two supplementary chapters, one of great importance, have been added by other hands, but the "opinions expressed are entirely his and remain as he wrote them . . . The result is intrinsically Clay's work in his own words, although it cannot be exactly in the form in which he would have left it had he lived to complete and polish the draft himself."

Let it be said at once that this is a book of the highest importance. It covers an enormous range and it really requires some previous knowledge of the long years and crowded events with which it deals to appreciate the amount of solid work which must have gone into its making. But that is not the point. Lord Norman was always something of a mystery to the City, let alone to the mass of his fellow-countrymen, during his uniquely long tenure of office. Even in his lifetime, but to a greater extent since, he has been translated into something more sinister—the embodiment of Orthodoxy and of Error: the incarnation of the "complacent conservatism of international

After an academic career of outstanding distinction, Sir Theodore Gregory was Economic Adviser to the Government of India from 1938 to 1946 and subsequently British Member of the Currency Committee at the Bank of Greece. As Professor T. E. Gregory he was a member of the Macmillan Committee, 1929–1931.

[1] *Lord Norman*, by Sir Henry Clay. London: Macmillan & Co., 1957, ix + 495 pp.

bankers."[1] Based not only on family papers and the reminiscences of business and other friends, but also on the full records of the Bank of England[2] and on the papers of Benjamin Strong, one-time Governor of the Federal Reserve Bank of New York, this book at last enables others than those officially or personally concerned with Norman's life and his multifarious preoccupations to pass, if not a *valid* judgement—for much is and will remain controversial—at any rate an *informed* one, so far as Lord Norman's policy and actions are concerned.

So far as the man can be separated from his work—and in Norman's case this is more than usually difficult—the outsider is always at a disadvantage. This book furnishes a picture—it is not from the hands of Clay himself—drawn with great art and feeling: it rings true and it explains much. My own contacts with Lord Norman were not intimate and were in any case intermittent and I do not presume to question the portrait drawn. No one who came into contact with him, however, could be insensible to that noble presence and to a certain air of majesty and *maîtrise* which combined with a grave courtesy to make an overwhelming impression. There was another side, and the friend who contributed the chapter entitled "The Man" does not hesitate to point it out:

> In retrospect, it is not difficult to make allowances for a man, by nature highly strung, working continuously under a strain which hardier nervous constitutions might well have found unbearable. But this does not get over the fact that he could be childishly violent and cruelly unjust towards those very people whose loyalty and affection made them put up with treatment they would not normally have tolerated . . . his emotional nature, which not seldom revealed a streak of implacability that was aggressive and pitiless.[3]

This disconcerting element in his nature finds, perhaps, a parallel in the late Lord Keynes' notorious rudeness and even brutality of speech. We all like our heroes to have no warts: nature is seldom kind enough to satisfy us in this respect.

Norman was born a Victorian, and held profoundly the characteristic belief of that Age that life without work was meaningless. He was, it is clear, like many others who are essentially men of action, a Mystic—"those who worked with him were made to feel that the ends they served through him were, in some undefined and unclaimed way, sublime"—[4] a leader of men, intuitive, an empiricist, artistic, of "lion-hearted

[1] A phrase of Mr. Roy Harrod's but not applied by him directly to Lord Norman; cf. the late President Roosevelt's sneering reference to the "old fetishes of so-called international bankers", cited Clay, p. 406.

[2] *v.* the Editorial Note to Clay, pp. VII and IX.

[3] *Op. cit.*, p. 482. [4] *Op. cit.*, p. 488.

courage and an unrelenting tenacity of purpose." But he was not an "intellectual" and no master of debate. "Not only did he have some difficulty in explaining himself to more than one person at a time: he actually resented having to do so and avoided the necessity whenever possible."[1] It was, therefore, *inevitable* when he was confronted by Keynes—indubitably the incarnation of dialectical skill and with a lifetime of experience in the verbal dissection of the most subtle points of philosophy and economics—that he should suffer by comparision, and in fact fail to carry conviction. I was present at the meetings of the Macmillan Committee when these men duelled with each other; it was a painful experience. I felt at the time, and I do so still, that the Chairman allowed the situation to get a little out of hand. However that may be, the world has been presented for twenty-five years, through the publication of the *Minutes of Evidence*, with a picture which is definitely misleading and distorted. Norman's case, whether on balance right or wrong, was intrinsically much stronger than his exposition made it out to be.

II

When Norman for the first time met his new "opposite number" at the Bank of France, M. Émile Moreau, in July, 1926, he told Moreau that "the Bank of England is my only mistress. I think only of her and I have dedicated my life to her."[2] It was a jealous love, and he strove unceasingly to embellish the object of his affection.

At least four aspects must be distinguished when Norman's activities as a central banker are under discussion. First, there are the relations between himself, as representing the Bank, with the government of the day and with the prime instrument of government policy, the Treasury. Secondly, Norman's relations with his senior colleagues—the members of the Court and of the Committee of Treasury. Thirdly, his relations with other central bankers. Fourthly, his efforts at modernizing and streamlining the internal and external working of the Bank: that is, the task of functional reorganization.

Norman's own views as to what the position of a central bank should be are clear enough. Called upon to give his views to the members of the Royal Commission on Indian Currency and Finance in 1926, and asked whether in his view it was desirable that there should be some co-ordination

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[1] *Op. cit.*, p. 484.

[2] Moreau, *Souvenirs d'un Gouverneur de la Banque de France* (Paris, 1954), p. 49.

between the policy of a central bank and the general policy of government, he thought:

> it is of the utmost importance that the policy of the bank and the policy of the Government should at all times be in harmony—in as complete harmony as possible. I look upon the bank as having the unique right to offer advice and to press such advice even to the point of 'nagging': but always of course subject to the supreme authority of Government.

Asked if that implied that "there should be some power in the Government ultimately to direct the general policy of the bank", he further said that "in my opinion it does not and should not."[1] Writing of the Reichsbank in 1921 he had said much the same:

> ... No one wishes to give an independent Reichsbank the power of veto over the 'entire financial and economic programme' of the German Government. I think that what we all have in mind is ... to make unsound finance and dangerous methods difficult though, as the State is Sovereign, not impossible.[2]

As regards the spirit with which a central bank should be inspired, it is sufficient to quote the record of a speech he made to his co-directors in 1929: " . . . in his opinion the Directors were not so much Directors of a banking concern as Trustees of a National Institution on behalf of the public."[3] Central banks must be responsible trustees: but there cannot be responsibility without power, and there cannot be power without freedom. That, I would suggest, is how Norman's attitude can be summed up. That was also the attitude of the Macmillan Committee.[4] In these respects there was no difference of opinion between Keynes and Norman.

But if Norman desired to be left alone in his Bank, he was equally unwilling to poach upon the preserves of others. " . . . Our attitude", he explained to the Foreign Office in 1931,

> is essentially non-political and is concerned solely with Central Banking ... we have no information to give to Ministers ... and we do not expect to receive political information from any one of them in those Capitals where we may have dealings with Central Banks. ... Our official connection in London is solely with the Treasury, and the fact that I am endeavouring from time to time to give you information ... does not in the least affect the position of the Bank of England *vis-à-vis* the Treasury. Whereas you (the Foreign Office) may be said to follow

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[1] Questions 14597 and 14598. [2] Clay, *op. cit.*, p. 290. [3] *Op. cit.*, p. 330.

[4] " . . . the major objectives of monetary policy" can only be attained "by individuals placed in a position of unchallengeable independence. . . . The managing authority should be the Bank of England. For we have in the Bank of England an excellent instrument for the purpose, independent of political influences, yet functioning solely in the public interest." This passage, as the style sufficiently indicates, was drafted by Keynes himself.

the policy of the League we, since its establishment, give the first place to the B.I.S. [Bank for International Settlements], and therein lies an additional reason for us to encourage Central Banking and to avoid diplomatic contacts.[1]

But if the Bank's "official connection" was solely with the Treasury, what exactly was it? One must distinguish between the personal relations of a Governor with the Chancellor and his principal advisers; the code, or the tradition, which governed the relations between the Bank and the Treasury; and the content or subject matter which these relations comprised.

During the first war, relations between the then Governor and the Treasury had not been free of difficulties; moreover,

> Before his time a visit by the Governor to the Treasury was a formal occasion for a specific purpose; Norman turned it into a regular routine. The traditional rule was for the Governor to be accompanied by the Deputy Governor on any visit to the Treasury; this rule lapsed because the visits were too frequent and the Governors had too much to do to duplicate each other's functions. He would call . . . once, twice or even oftener in a week. There was usually some specific business pending . . . But if there was no specific business, the Governor's report on the City, its difficulties and prospects, was invaluable to the Treasury, although time-consuming, and the Treasury's advice on the political situation invaluable to the Governor.[2]

As for the "tradition", that was concerned primarily with Bank Rate and the accepted view, as Churchill, then Chancellor, set forth in answers to Parliamentary questions, was that "the assent of the Chancellor of the Exchequer to movements of the Bank Rate is not required by law or custom." Though "decisions in regard to alterations of the Bank Rate are taken by the Bank of England on its sole responsibility", yet there was this significant change that "it has frequently been the practice of the Governor in post-war times to inform the Chancellor when a proposal to alter the Rate is about to be considered."[3]

So far as Bank Rate is concerned, the position, up to the "abandonment" of the gold standard in 1931, might be described as one of "unstable equilibrium". Already in November, 1920, Norman was writing to Austen Chamberlain that,

> when I call to mind your remark to my predecessor (that an independent rise in the Bank Rate would be an unfriendly act); when I remember our continuing desire for higher rates ever since last July and indeed long before it, and your continuing unwillingness to consent, owing to political reasons . . . I wonder what (in the spirit as well as in the letter) is the meaning of 'political pressure'.[4]

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[1] Clay, *op. cit.*, p. 289. [2] *Op. cit.*, pp. 294-5. [3] *Op. cit.*, p. 294. [4] *Op. cit.*, p. 292.

In 1925, after the return to gold, there was a clash with Churchill, then Chancellor of the Exchequer. Norman reported to the Committee of Treasury after raising Bank Rate on Thursday, December 3, that,

> he had called at the Treasury late in the evening of December 2, to leave word, as a matter of courtesy, for the Chancellor of a possible increase in Bank Rate. About 11.20 a.m. on Thursday the Chancellor himself had telephoned protesting against the proposed increase and threatening to state in the House of Commons that such increase had been made without his having been consulted and against his wishes. Such action on the part of a Chancellor seemed to be without precedent.[1]

Later, there was to be a *concordat* with Snowden, but to appreciate the terms in which it was worded requires a somewhat wider survey of the post-war position.

As regards the international relations of Great Britain, the first world war raised the inter-related issues of a depreciated exchange, reparations, British war debts and the reconstruction of a war-torn Europe. On the internal side, government and Bank alike had to face industrial disorganization, unemployment, the level of Bank Rate and the problem of the debt—funded and floating.

Nothing is more indicative of Norman's grasp, not of theory, but of the fundamentals of monetary management, than his instinctive recognition of the danger of a large floating debt. As early as April, 1919, he was noting that "all Floating debt was incurred as War expenditure, and should be treated as such without delay. Its existence paralyses the money-policy of the Treasury." An ordinary funding loan would not meet the situation. "Nor can we contemplate loading the Banks again . . . The scale is, of course, too great to admit of any voluntary scheme." Therefore, "the Income Tax-payers must stand by and take firm the requisite total, *pro rata* to their Tax returns."[2] Two years later, in May, 1921, he was writing to Strong that "so long as a Government has directly or indirectly a large floating debt, I wonder if any system can leave the Central Bank of that country really free to manage affairs from a purely financial standpoint." Better to fund "by means of a Conversion Loan to prevent our actual floating debt increasing in size even at some cost of interest."[3] So that, when, in 1929 Snowden, as Chancellor, and he were discussing the situation, Bank Rate and floating debt were both under review. Norman noted that the—

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[1] *Op. cit.*, p. 293 and *v.* also P. J. Grigg, *Prejudice and Judgment*, 1948, p. 193.

[2] *Op. cit.*, pp. 117-118. I leave out the details, which are of considerable technical interest. [3] *Op. cit.*, p. 163.

question of the occasional difficulty and danger arising from the necessity of large tenders being essential every Friday was also discussed. . . . The Governor added that the joint interest of the Chancellor and himself in these tenders was absolutely and eminently similar—though perhaps not so eminently as regards the Bank Rate—so that they had better go into partnership, each doing his own part of the job in harmony with the other. The Governor said that his was the technical and financial side—the Chancellor's was the political and fiscal side. On this basis the Chancellor must now leave the Bank Rate to the Governor, to which the Chancellor agreed, stipulating that the Governor should see him next week; the Governor promising that he would not this autumn put up the Bank Rate for fun but only when it was essential and, rather than have any fears about a currency shortage, would increase the Fiduciary maximum too soon rather than too late.[1]

Where this compromise left the technical situation is a little obscure: for, clearly, there *had* to be a relationship between the "tender rate" and the level of Bank Rate: in fact, there could not be an absolute divorce between the "fiscal side" and the "technical and financial side". But it is clear, also, that the "tradition", insofar as it implied a unilateral right to fix Bank Rate, was slipping.

After the fall of the gold standard, the situation was revolutionized: 1931 marks the transition from the old age to the new. The operations of the Exchange Equalization Fund insulated the domestic credit situation; the strain was taken by the exchange rate variations and not by Bank Rate changes; the era of a low fixed charge for money was inaugurated. Also there was a transfer of authority and Norman disliked the situation, though by 1937 he was pointing out to the Governors of the Empire central banks that whilst he was still a central banker,

> I would also ask you to remember that I am an instrument of the Treasury. The two are, of course, not incompatible . . . and I would not say that I am in any way embarrassed by divided loyalties . . . When the Gold Standard was abandoned, there took place an immediate redistribution of authority and responsibility, which deprived the Bank of some of its essential functions. Foreign Exchange became a Treasury matter, and perhaps it still remains to be seen what other responsibilities pass with it from Threadneedle Street to Whitehall.

Some people, he continued, "might have expected that the result would be friction. The exact reverse is true, largely—I daresay—because we have been fortunate in the particular individuals and personalities with whom we have had to deal . . ."[2] But if there was now to be partnership, Norman never lost his grip: his "chief fear was a large Floating Debt . . .

[1] *Op. cit.*, p. 297. [2] *Op. cit.*, p. 437.

he even suggested that a compulsory funding of a part of it might be necessary."[1] At times the old spirit would out:

> When fear of war began to overshadow every other influence in 1939, he resented the limits set by purely political conditions to the Account's power; he was not, he declared, going to sit with his hands folded seeing his assets go and waiting for control, sacrificing everything London stood for. He wanted to counter-attack . . . and he put to the Chancellor, but without results, the alternative policy of ending Cheap Money and facing some sacrifice in the domestic field for the benefit of preserving London's international market. Nevertheless he confessed that he had never felt so confused and baffled and did not know which way to turn.[2]

III

The Interim Report of the Cunliffe Committee had referred to the possibility of its making proposals for changes in the organization of the Bank; in its final Report it declared that events had made it unnecessary to proceed further in this matter.[3] Bagehot's celebrated discussion of the position of the governorship of the Bank and his compromise solution of a permanent Deputy Governorship (in reality a summing-up of an earlier controversy)[4] is evidence that the problem of the higher Direction of the Bank goes back far into history; and certain changes in the internal structure of the Bank had become necessary long before Norman's day.[5]

Norman's general outlook was "authoritarian"[6] and he had "inherited and maintained a tradition of long standing, that 'the Governor governs'."[6] But that did not prevent him from realizing the dangers of an autocracy: he had himself, at an early date, writing of the Cunliffe *régime* at the Bank, called it a "one-man-show which has brought us into disrepute."[7] And "for the first half-dozen years of his Governorship Norman had to do his work under the unchanged pre-war constitution and organisation of the Bank."[8] He had to clear up his own position: how long should he serve? He had to face the question of the relations with his senior colleagues—the members of the Committee of Treasury—and that involved the question of the *composition* of the Committee: for, given that the Bank also needed a general staff of experts, should these, or some of them, become Directors? And he had to

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[1] *Op. cit.*, p. 460. [2] *Op. cit.*, p. 441.
[3] *First Interim Report*, para. I, and *Final Report*, para. 4.
[4] *v.* Gregory, *Introduction to Tooke and Newmarch's History of Prices*, p. 104 *et. seq.*
[5] Sir John Clapham, *History of the Bank of England*, Vol. II, p. 358 *et. seq.*
[6] Clay, *op. cit.*, p. 483. [7] *Op. cit.*, p. 108. [8] *Op. cit.*, p. 299.

make up his mind what experts he really needed, and, equally important, *how* to use them.

These are not simple matters to handle. The relations between the head of an organization, his senior colleagues and his experts (who may also, as came to be the case in the reorganized Bank of England, be among his senior colleagues) can never be described in a simple formula, for these relations depend in fact upon the rôle of the organization itself. A central bank is not a debating society: it is, or ought to be, the prime instrumentality of monetary policy. The objectives, whatever they may be, are capable of being summarily stated, but at times there may (and probably will) be conflicts of ends, and alternative ways of attaining these ends. Moreover, the execution of policy involves contacts with other domestic institutions and other similar bodies in foreign countries, contacts, therefore, with individuals of diverse interests, of varying psychological make-up and often, also, inheriting entirely different traditions. The end is, and must be, Action; and discussion and debate, however inevitable and desirable, must be governed by that fact.

Because Action *is* the end, it has always seemed to me, and seems so still, that it is nonsense to regard a central bank as a kind of penny-in-the-slot machine, which can grind out the predetermined result if only the "right" views are entertained, without regard to the personal qualities and qualifications of the head of the institution. Much was said—and rightly said—in the 'twenties and 'thirties of the dangers of exaggerating the "automatic" element in the working of the gold standard. It is an extraordinary thing that it should be supposed that *now*, when the world possesses managed currencies, the personal qualifications of the leaders of central banks should be regarded as irrelevant, or rather, if those qualities are positive rather than negative in kind, as actually inimical to the working of the machine.

Norman himself was quite aware that the days called for change. Writing in 1928 he said that:

> So long as London was dominant throughout the world the rotation system worked well in this country but was not tried in any other. With the passing of that dominance to New York, I do not think it can work well in this country. Central Banking, a more or less managed Currency, innumerable questions of Credit and innumerable problems of Reparations and External and Internal Debts, *require a professional in both chairs and a professional without outside interests.*[1]

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[1] *Op. cit.*, p. 310, italics not in the original.

Further:

> We were late in building up a body of professionals drawn from outside. We could not draw them from inside because the experience does not exist there . . . I think we should change the constitution to the extent of allowing a few of these professionals to sit on the Court . . . it is impossible for the Court as a whole to be familiar with the technical questions or with all the business that is going on. I think, too, it will be difficult to recruit the Court indefinitely in the old way—the numbers of candidates are decreasing . . .[1]

His reforming zeal went a good deal further than this, as can be seen from the suggestions he made to the Committee of Treasury, which he proposed submitting to the Macmillan Committee "with the object of avoiding unfriendly recommendations".[2] They included proposals that "the appointment of the Governors should be subject to the approval of some outside body or person" and that "there should be some limitation on the Court's freedom of choice of Directors." On these and other matters his colleagues were more conservative than himself. One cannot but agree with Clay when he says "it is to be regretted that Norman was not allowed to unfold before the Macmillan Committee the internal reorganisation and the external adjustments which had been in his mind for years."[3] The debate inside the Bank *had*, in fact, gone on for years: but it was not till 1931 that the Court agreed to the proposition that, "subject to annual election, as required by the Charter, the terms of office of the present Governor be regarded as not subject to any definite limitation as to time." The discussion was not confined to the Court; Benjamin Strong played a rôle. Strong, himself a masterful person, thought the issue was plain: "With you I am clear that you must decide between a tradition and a person." This was in 1926, when there was a current of opinion at the Bank which desired to retain Norman in a special capacity "as a special assistant to Governors appointed in the traditional way", a proposal which, fortunately, was never adopted. "On the whole", Strong wrote to Alan Anderson in 1926,

> my thoughts lean to a clear-cut decision—either save the tradition or keep the person. The former if the sky is clear— the latter so long as the clouds are about. The prognosis is for clear sky—but it may be well to have the umbrella handy.[4]

Anderson naturally retorted that "I don't want to choose—they're both good and I want them both."[4] The resolution of the Court of 1931 did, in fact, preserve both the tradition and

[1] *Op. cit.*, p. 311. [2] *Op. cit.*, p. 313. [3] *Op. cit.*, p. 316. [4] *Op. cit.*, pp. 305/6.

the man. But the influence of Strong on Norman's own way of thinking was important:[1] for Strong had firmly insisted that a "new standard will require more continuity and (if you please) a more technically trained management than the old tradition did."

His relations with the Court and the Committee of Treasury are summed up by Clay as follows: " . . . He made sure that, if he took the first impact of the problems that assailed the Bank, he secured the support of, and shared the responsibility with, the Committee of Treasury."[2] No such summing-up occurs in respect of the relations of Norman with his experts. But I have a distinct recollection of Norman being asked at one of the meetings of the Macmillan Committee whether, having appointed expert advisers, he made use of them. "Well", he said, "I make up my mind and I ask my experts to explain to me why I've done so". This sally does not appear in the printed minutes, but I have it from Prof. R. S. Sayers that Clay told him that, when he was first appointed to the Bank, Norman had said substantially the same thing to him.

IV

Even if Norman had done nothing else in his life than forward the cause of international co-operation in the sphere of monetary affairs, his contribution to human well-being would still be a very great one. The necessity for such co-operation had been recognized early in the inter-war period, and the Genoa Conference of 1922 had called for an International Monetary Convention, "to be worked out by a conference of Central Banks, which the Bank of England should convene."[3] But Norman had long since foreseen the need: ". . . From the time he first met Ben Strong in 1916 it is clear that he foresaw the need of international economic co-operation and began to prepare for it, and he found in Strong an ally who shared his views."[4] He took the initiative "and made the greatest contribution to this policy, and the form it took was due to him."[5]

Norman himself has left on record the reason why, in the earlier stages, international co-operation took the form it actually did—a form which then, and since, has incurred criticism; for in its earlier stages it could be, and was, represented as an attempt at international dictatorship by three powerful personalities: Norman himself, Benjamin Strong of the New

[1] See Clay's opinion on p. 300. [2] *Op. cit.*, p. 299. [3] *Op. cit.*, p. 137.
[4] *Op. cit.*, p. 282. [5] *Op. et loc. cit.*

York Reserve Bank and Dr. Schacht, the President of the Reichsbank.

Norman's account was given to the Macmillan Committee:

> The first ideas defined came, I think, from Genoa, and among other things which the Genoa resolutions proposed was that the Bank of England should summon a conference of Central Banks to do, in effect, what has now become the duty of the B.I.S. It always appeared impossible, during those years when we were waiting, to summon such a conference, for the excellent reason that the people would not come. They would not come, not because they were unwilling to co-operate, but because they were unwilling to face the publicity and the questionings in their own countries which would arise if they attended any such conference, and all the attempts that I made to that end failed. But, notwithstanding that fact, there were at that time outstanding individuals, as I believe, in the Central Banking world who made co-operation possible in its earlier stages, and pre-eminent among them were Governor Strong and President Schacht. They were both dominant men, extremely interested from different sides—and very different they were—in co-operation. They were the most wholehearted supporters of the idea and did, in its early stages . . . a great deal in trying to bring about a common policy as between the various banks. Owing largely to their personalities, they were the two men who were outstanding in that respect, and they are no longer with us to-day.[1]

The problems to be faced were real enough: the restored gold standard simply could not work on the old semi-automatic lines. London was affected by the policy of "offsetting" gold inflows adopted by the Federal Reserve System; later by the drain on European funds induced by the New York Stock Exchange boom; by the enormous holding of sterling accumulated by France; by the flow of funds to Germany and by the tendency (in consequence of relative costs) for Europe to draw gold from London, though paying for it in dollars; by the reparations question and by the necessity of doing everything possible to restore the financial structure of Europe. In the 'thirties, Norman had not only to deal with the consequences to his own Bank and to the London market of the "abandonment" of gold. He was faced by an altogether new situation in the U.S.A., which was also "off" gold for part of the time, and where the U.S. Treasury was replacing the Reserve System as the operative agency in the sphere of international monetary relations.

No set of ready-made rules could possibly be applied to the successive problems as they arose. This is the real justification of the intensely personal nature of the co-operation as it

[1] *Minutes of Evidence*, question 9188. Benjamin Strong died on October 16, 1928; Schacht had resigned his post at the Reichsbank in March, 1930, resuming office again on March 17, 1933.

first developed though, as the evidence shows, it is possible to exaggerate the exclusiveness of the relationships (after all, the French had, somehow or other, to be carried along and there were close contacts with other European central banks, by visit and by correspondence) and to exaggerate their harmony: for on at least one occasion there was a sharp conflict between Norman and Strong, which occasioned some very plain speaking by the latter.[1]

But, just because men are not immortal, co-operation on the basis of personal friendship and congruity of view cannot, in the nature of things, provide the solution of the *long-term* problem of co-operation. There must be some more formal machinery of association—though such machinery will not work adequately unless there is at the same time some over-all agreement as to means and ends: co-operation is a process and not an end in itself. With the creation of the Bank for International Settlements a new era began. Here was the "Bankers Club", where the central bankers of Europe could meet once a month and discuss their problems without publicity and as a matter of course. It survived the war and still performs this useful function among others, in spite of the existence of the I.M.F. and the E.P.U., with which latter institution it is, in fact, officially connected.

V

No one can really assert that the return to the gold standard after the first world war was not in accord with the public opinion of the time: so much is conceded even by those most sympathetic to the views of the late Lord Keynes.[2] It had been announced as the objective of British policy in the First Interim Report of the Cunliffe Committee early in 1918[3] and successive Chancellors of the Exchequer had reaffirmed the same intention. Largely under British inspiration, the restoration of the gold standard had also received the sanction of the two International Conferences of Brussels (1920) and of Genoa (1922). Moreover, the post-war years had witnessed an orgy of currency disorganization and of hyper-inflation which clearly called for concerted action. That Great Britain should take a

[1] *Op. cit.*, pp. 258-266.

[2] R. F. Harrod, *The Life of John Maynard Keynes*, 1951: " . . . in 1923 the vast majority were still striving after it" (p. 340) and p. 357 (of 1924) "Keynes continued to hold that we should not return to the Gold Standard at all; as the months moved on, he seemed to be more and more isolated in this opinion."

[3] Para. 18. " . . . it will be clear that the conditions necessary to the maintenance of an effective gold standard in this country no longer exist, and it is imperative that they should be restored without delay."

leading rôle in currency restoration and should set a good example by herself returning to the gold standard were not unreasonable assumptions, given her traditions, her considerable economic interest in world stability and her still very considerable economic resources. But given this general background, some grave issues were still left open. There was the question of *when* to return and *how* to return. As regards the first, 1925 was a crucial date, for the existing prohibition on the free export of gold was due to expire and a practical decision whether or not to continue restriction *had* to be taken. As regards the second, it would have been possible to return, if return were decided upon, either at the old parity or at a new one. "Devaluation" (i.e., return at a parity lower than the pre-war one) had already been recognized as a tolerable solution, at any rate for heavily depreciated currencies,[1] and the Brussels Conference had urged caution in the matter of deflation. Moreover, to take the specific case of Great Britain, unemployment had been heavy, though not constant in volume, ever since the collapse of the immediate post-war boom. There were, obviously, risks attached to any policy that might intensify unemployment or that might involve, alternatively, discriminatory wage adjustments.

It is impossible, I suppose, for any one who took part in the discussions of those days to look at all these matters in a completely objective manner, even after the lapse of a quarter of a century. I still do not believe that the return to gold, as such, was an error. I do not believe that the choice of the pre-war parity instead of a rate some 10 per cent. below that parity,[2] was the *sole* cause of our troubles between 1925 and 1931. I agree entirely with Clay's argument that a rate 10 per cent. below parity had no particular scientific sanctity, in the sense that in the years immediately before the return to gold the rate had varied very much from time to time, and therefore it is questionable whether the *de facto* rate, before the movements associated with speculative anticipations of a return to gold, "represented a stable balance of prices or costs in Britain and the external world, a balance which would either maintain itself thereafter or could be maintained by credit policy without

[1] Genoa Conference Report, Cmd. 1667 of 1922, p. 66.

[2] The assumption that the pound sterling was overvalued by some 10 per cent. was at the time due to Keynes' comparison of British cost of living figures with the cost of living figures for the State of Massachusetts and not with the cost of living figures published by the U.S. Bureau of Labour. Had the latter figure been chosen for comparison, it would not have been difficult to show that the £ was undervalued, not overvalued, by some 10 per cent. I have no doubt, however, that there was in 1925 overvaluation of the pound. But I questioned then, and I question now, the validity of the statistical procedure. (*vide* my *First Year of the Gold Standard.* London, 1926, pp. 49–52.)

any difficulty or strain on the economy of the United Kingdom." In other words, "the choice was whether to hold *any* exchange rate or not."[1] It is also true that it is quite possible that if the U.K. *had* stabilized at a lower rate, subsequent devaluations by other competing areas would simply have resulted in still lower rates than those actually adopted.[2] I would also agree that there were solid reasons, all questions of mere prestige apart (though prestige also had a cash value), which might justify the rate actually chosen—the most important being the reduction, if a lower rate had been chosen, in the real value of British income from "Invisibles".[3] But all this does not alter the fact that, though there might have been trouble with a $4·40 rate, it was highly probable that there would be *still more* trouble with a $4·86 rate. Undoubtedly, the rate chosen *did* aggravate the difficulties of the export industries (already unfavourably influenced by a variety of factors), *did* involve serious wage adjustments and/or unemployment, *did* greatly thereby exacerbate class and social sentiment. Moreover, it helped to create a climate of discussion which, confusing the effects of choosing a particular parity and choosing to return to gold, has ever since gravely prejudiced monetary debate in this country.

Nevertheless, nothing in all this justifies the belief that the return to the gold standard was undertaken in a light-hearted spirit, without due consideration of the issues involved: the circumstance that the Report of the Committee on the Currency and Bank of England Note Issues of 1925 did not argue the case in detail (though in itself regrettable) is no proof to the contrary. In point of fact, as early as 1923, Lord Bradbury had written to Norman that, whilst it would not be wise—

> *to commit ourselves to the re-establishment of a full-blown gold standard in 1925* (my italics), I am strongly of opinion that if we get through the present autumn without a serious break in sterling, the time will have arrived for setting up arrangements which will lead automatically to such re-establishment within a definite period.

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[1] Clay, *op. cit.*, p. 159. I take some credit for the fact that I had pointed out all this at the time; also I drew the distinction between an immediate "adjustment crisis" due to the parity chosen overvaluing the currency externally, and an ultimate "stabilization crisis" due to the parity chosen undervaluing the currency externally. Gregory, *op. cit.*, p. 16 *et seq.*

[2] *Op. cit.*, p. 159. Dr. O. M. W. Sprague had, in fact, said substantially the same thing to the Macmillan Committee: question 9266: "You are not justified . . . in assuming that everything that has fallen out during the three years following 1925 would have taken place in exactly the same way and at the same time, if there had been a return to the gold standard at a different period and at a different rate."

[3] Clay (*op. cit.*, p. 159) points out that in the three years 1922–24 "they were estimated at £1,083 million (net) as compared with £2,288 million for exports." Not, therefore, a negligible ratio!

But what were these arrangements to be? The proposal was that:

> If the pound does not fall this autumn below $4·50, I believe it would be safe to fix a maximum selling price of say 85/– per standard ounce falling by say 1/– annually. . . . The actual selling price could be fixed by the Bank from time to time at its discretion, subject to the statutory maximum and the return to parity thus accelerated if conditions proved favourable.[1]

Now, the old price of standard gold was 77/10½ per ounce, so that Bradbury's proposal would have meant a return to gold at a lower parity and the proposed discretionary powers given to the Bank *might* have meant a permanent devaluation if conditions proved very unfavourable—even the sliding scale would have meant a slower process of adaptation. Though Norman, in his reply, did not "jump at such a sliding-scale arrangement as you mention" yet he also could not "see that the time has come to make this a question of practical politics,"[2] (i.e., the return to gold).

It is, indeed, now clear that Norman's attitude was a much less dogmatic one than he is generally credited with. In 1918 he had advised the then Governor that he should advise the Cunliffe Committee to recommend import controls and the prevention of export of capital and foreign loans;[3] in 1922 he had, in correspondence with the Governor of the Sveriges Riksbank, laughingly demurred at the suggestion that the U.K. should return to a free gold market and that he (Norman) should be "the kindhearted gentleman to bell the cat."[4] Norman in 1923 had proposed to accumulate a reserve in New York; in connection with this he consulted a high-powered Committee,[5] which, *inter alia*, suggested that "statutory authority be obtained to continue the Export Control Act until not later than 1930. . . ."[6]

VI

As already suggested, Norman's reputation has suffered, mere prejudice and wilful misunderstanding apart, from the impression conveyed by the evidence he gave before the Macmillan Committee. It is not the later evidence he gave on

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[1] Clay, *op. cit.*, p. 147. Apart from anything in Clay's book, Sir James Grigg, writing with intimate knowledge of the situation within the Treasury at the time, is also emphatic on the point that " . . . there was no question of its having been a snap decision. The examination was careful and exhaustive . . . All the points made by the enemies or critics were put to his [the Chancellor's] official advisers, and argued out at length in written memoranda and oral discussions." P. J. Grigg, *Prejudice and Judgment*, p. 182.

[2] *Op. cit.*, p. 148. [3] *Op. cit.*, p. 112. [4] *Op. cit.*, p. 142.

[5] It consisted of Asquith, Addis, Bradbury, Gaspard Farrer, Inchcape and Felix Schuster, *op. cit.*, p. 146. [6] *Op. cit.*, p. 147.

such topics as the B.I.S. that matters; on these points there is very little that can be objected to. But as regards the evidence given at his first hearing on March 26, 1930, the case is different. With some show of reason, he can be accused of denying the practical importance of some of the elements of the "orthodox theory" in the narrower sense. He can also be accused of overlooking, or of neglecting, the *social* implications of the orthodox view: namely, that Bank Rate policy may involve the creation of unemployment, or, to take the extremer view, that it *must* involve unemployment. In the end, driven on by Keynes, he admitted that a rise in Bank Rate should have an effect in the direction of unemployment. That was the question posed by Keynes: his reply was "I should imagine that, as you have stated it, that is the orthodox theory, taking a long view, and as such I should subscribe to it—I could not dispute it with you."[1]

Half the trouble, it is clear to me on reflection, arose in this contest of wits from the fact that Norman was invariably taking the short-term view and Keynes the long-term one—paradoxically enough in the case of Keynes, the author of the view that "in the long run we are all dead" and the principal critic of the supposed "automatism" of the gold standard. Now, Norman was brought up in the money market and, as a matter of experience, the first or initial effects of Bank Rate changes were undoubtedly in the short-term market. It was Norman's position that changes in Bank Rate policy were frequently of short-term duration and *exhausted* their effects in the money market. His opponents, Keynes and McKenna,[2] were trying to wring from him an admission that deflationary action by the Bank, viâ the short-term market, *necessarily* involved a more than proportionate effect on the volume of joint-stock bank resources available for the general needs of the community. At this distance of time, I am more inclined now than I was then to think that both sides might have been right, given the time element which governed their respective ways of thinking. But all this is a very minor matter, as compared to the unemployment issue.

Whatever Norman may have *said*, both Clay's book and other sources of information make it perfectly clear that in practice Norman was not in the least ignorant of, or inclined to neglect, the unemployment question and its relations with

[1] *Minutes of Evidence*, Question 3,390. It is only fair to refer to a very different attitude of mind than my own on these matters—Harrod, *Life of John Maynard Keynes*, p. 418.

[2] See particularly the answers to questions put by McKenna: 3,479, 3,502 to 3,507 (*Minutes of Evidence*).

Bank Rate policy. That attitude comes out best in a conversation which he had with M. Émile Moreau, the then Governor of the Bank of France, in May, 1927:[1]

> Should he [Norman] then raise his official discount rate? The Governor of the Bank of England indeed thinks seriously that he could not do so at present without provoking a riot. Paris can force him to do so and take the responsibility, but, however, without this being any relief to the Bank of France. For himself he does not feel able to take this decision.
>
> It is the condition of British industry which is in fact the tragic feature of the English situation. Every bank in the Kingdom is heavily committed in the cause of industry. The percentage of funds immobilised has reached a maximum. 54 per cent. of available bank funds have been lent to industry, which cannot do without them even if the rate for money is raised to 10 per cent. If it were reduced to 2 per cent. on the other hand, the banks could not immobilise their funds any further by granting fresh credits.
>
> In these circumstances, it is for the Governor of the Bank of England an imperative duty to take advantage of every opportunity to reduce the burdens of industry: a reduction in the rate cannot increase the volume of credit placed at the disposal of industry, but makes things easier for it. Inversely, any rise in the rate increases its burden without inducing it to free itself from debt. When one thinks of the suffering, the unemployment and the social repercussions which that means, one is bound to hesitate.

No opponent of the gold standard could have put the problem more accurately!

VII

Norman's ventures into the field of industrial reorganization are retold in considerable detail by Clay, who was the "economist whose interests had been in industrial, not banking questions"[2] called in by Norman, together with other experts, to assist him. The cynic might be inclined to say that as the difficulties of the iron and steel, coal, shipbuilding and cotton industries were due to the return to gold, it was only right that the Bank of England should try to remedy the wrongs it had helped to bring about. This would, of course, be a gross misrepresentation of the facts. All questions of parity of exchange apart, a large variety of causes were at work, some of them, such as disarmament, not intrinsically undesirable but having grave repercussions on the firms and industries affected.[3]

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[1] *Op. cit.*, p. 228 *et. seq.* Clay quotes from Moreau's article in the *Revue des Deux Mondes*, the content of which appears to be the same as the relevant passage in Moreau's *Souvenirs*, p. 330. [2] *Op. cit.*, p. 327.

[3] *Op. cit.*, p. 318. "When it is remembered that a capital ship provides as much employment as forty large tramp-steamers, employment largely specialised and highly skilled, the problem created for Armstrongs by the Government's agreement at the Washington Naval Conference to build no more capital ships can be realised."

At the time these salvage operations began, the Bank of England was concerned as the banker to one of the firms in difficulty, the great armaments firm of Armstrong Whitworth. But the City—in the sense of the great issuing houses—was remote from industry, though the commercial banks (especially the Lancashire banks, as regards cotton) were directly concerned with the future of individual firms. Three things were needed: Leadership and Inspiration, Finance, and Organization and Staff. Norman provided all three. He took the initiative; he overcame the misgivings of the Committee of Treasury and of the Court as regards the provision of funds and he promoted the Securities Management Trust and the Bankers Industrial Development Company. To deal with the complications of the shipping industry, two realization companies were necessary—the Deputy Governor of the Bank became the Chairman of both.[1] In this way arose the Lancashire Cotton Corporation and the large rationalized units of the steel industry.

He went further. Before the Macmillan Committee, he and Sir Guy Granet had shown themselves as sceptical in the extreme [2]on the subject of what became known later as the "Macmillan Gap",[3] i.e. the deficiencies of the issue market in the provision of finance for smaller firms. But whatever he said in public, this did not prevent Norman from providing additional finance for the United Dominions Trust and from giving his moral support to the movement which finally resulted in the creation of the company Credit for Industry, "... set up with the purpose of providing finance for the smaller industrial concerns, where the amount required would not justify a public issue ... The Governor suggested Bruce Gardner as a Director, and the company performed a useful service until war broke out."[4] During the war also, the improvement of the machinery for meeting the financial needs of the community continued to occupy his mind, though he had left the Bank before the final steps were taken.[5]

It must be borne in mind that Norman's efforts in this field involved an enormous amount of work, apart from demanding the acceptance of very considerable risks. Clay is surely right in pointing out that his effort "is even more remarkable when it is remembered that its author's main work

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[1] *Op. cit.*, pp. 344-345.

[2] Evidence taken on 18/2/1931.

[3] It is only proper to say, at this distance of time, that Lord Brand was the member of the Committee most concerned in emphasizing this problem.

[4] *Op. cit.*, p. 352. [5] *Op. cit.*, p. 472.

—the maintenance of stable monetary conditions—was at the same time requiring his care and attention for the effects on sterling of the New York stock market boom, the world decline in trade, a flight from sterling and the working out of a new system of international payments based on a freely moving exchange rate."[1]

VIII

It is surely impossible to deny the attribute of greatness to Lord Norman. Yet reading some of the reviews to which this book has given rise has left me with the feeling that (apart from one case of sheer malignancy) the admiration expressed for him or the praise accorded him is of a somewhat grudging, reluctant kind, and I have been looking for the reason why this should be so. Certainly his was a character which did not lend itself to easy popularity: he lived in a relatively restricted world and did nothing to make himself known to, or understood by, the mass of his countrymen. Perhaps, it may be said, he was too rigidly "orthodox": but if there is anything that is brought out in this book it is surely this, that if Norman served orthodox *ends*, he was the reverse of orthodox in the means he employed to achieve those ends: he was in fact endlessly fertile in expedients and prepared to accept measures which find no place in the received tradition.

Nor can it be said that the ends he pursued—the maintenance of the financial and economic power of his country and the restoration and strengthening of international economic relations—were only remotely related to the needs of his time. What, then, is the explanation? I can only suggest that in the 'twenties and 'thirties a profound modification in the underlying spirit of the Age was taking place which made, or seemed to make, the ends desired by Norman less humanly significant, and therefore to make the sacrifices involved in achieving them the less tolerable. Norman's reputation has correspondingly suffered. Perhaps we are still too near the controversies in which he, and we also in a minor degree, took part to be capable of completely impartial, and therefore historically valid, judgement.

Theodore Gregory.

London/Athens.
August, 1957.

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[1] *Op. cit.*, p. 359.

How much more Inflation in the U.S.?

By Dexter M. Keezer
and
E. Russell Eggers

IN 1951 the leaders of the Swedish Federation of Labour recognized that the granting of the wage demands of their constituents would, as a result of increasing costs, lead to an increase in prices and thus in the cost of living. Their response to this prospect, however, was not to temper the demands so that they would be less inflationary. It was to ask for, and receive, a supplemental wage increase to recompense the members of the Federation for the loss of purchasing power caused by the inflationary impact of the demands.

In the United States we have never had such frankness on the part of union officials in dealing with the effects of wage increases. However, in recent years we have had numerous wage increases which have had inflationary effects of the sort frankly conceded by the Swedish union leaders. And with our unions exercising a broad monopoly power, which is exempt and promises to continue to be exempt from attack under the federal anti-trust laws, there is widespread fear that the *coup de main* will be given to steadily sustained prosperity by the granting of wage demands which result in a destructive course of price inflation.

In this article we examine this fear and come to the conclusion that, while it has some basis in fact, there is a good chance that it will not materialize to an economically devastating degree.

At the outset, it should be made clear that for a large part of the price inflation since the end of the second world war, the successful demands of labour unions for wage increases cannot be held responsible in any major degree. This is true of the first great post-war wave of inflation from 1945 to 1948 which, as indicated by Chart I, resulted in an increase of about 30 per

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cent. in the general level of prices. It is also largely true of the surge of inflation which accompanied the Korean war and which, in a single year, 1950–51, resulted in a price increase of 8 per cent. Together, these two waves of inflation account for about 80 per cent. of the total increase in the general level of prices since the end of the war.

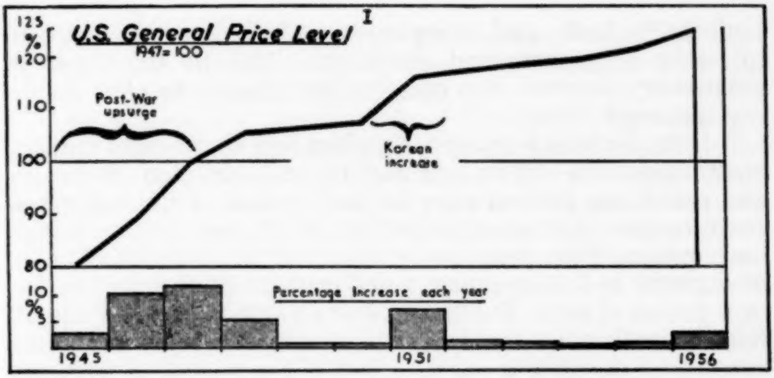
In both cases, increases in the general level of wages went along with the increases in the general level of prices; but it was clearly not a case of cause and effect. Wage increases took place largely to fill a vacuum created by prices sent soaring by forces other than rising wage costs. It is only in the latter phases of the post-war inflation—since 1953 and particularly in 1956—that the unions can reasonably be brought to the bar and charged with being the culprits.

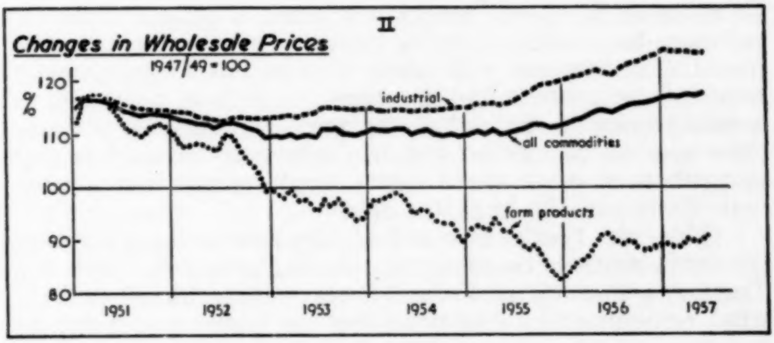
* * *

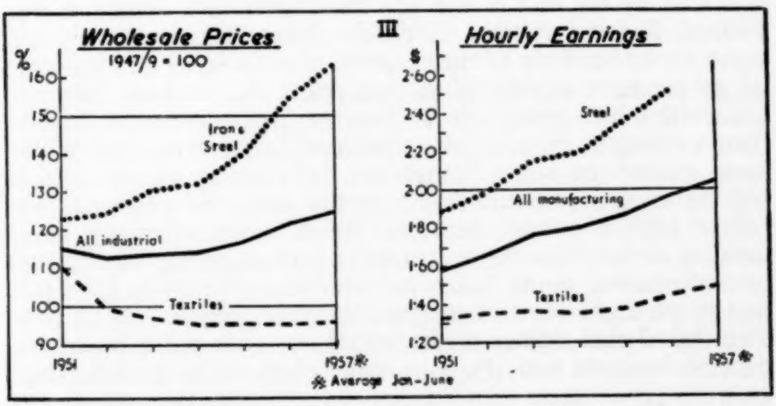
To see why this is so, and also to gauge the prospect that the labour unions will in the years ahead constitute themselves an engine of price inflation, it is necessary to take a quick look at inflation since the end of the war and its major causes.

For the first post-war wave of inflation—that which by the end of 1948 had brought the purchasing value of the pre-war consumer dollar down to 58 cents—the major causes are unmistakably clear: (1) the compounding of war-created shortages and a post-war rush to spend a tremendous pile of money, or something readily convertible into money such as war bonds, which had been built up during the rationed years of the war; (2) dismantling of the machinery for effective monetary and credit control as a part of the programme for financing the participation of the U.S.A. in the war.

During the war years, the opportunities of both individuals and companies to spend their incomes for current consumption or construction were restricted by rationing. As a result, at the end of the war liquid assets (i.e. money or its equivalent) held by individuals totalled as much as $155 billions, an increase of $105 billions, or 210 per cent., during the war years. Corporations, too, had piled up money they were eager to spend for new producing facilities, which they had been barred from building during the war, to the tune of about $73 billions—276 per cent. more than they had had at the outbreak of hostilities. With the abandonment, or breakdown, of war-time controls,


I
U.S. General Price Level
1947=100
%
125
120
110
100
90
80
Post-War upsurge
Korean increase
10
%
5
Percentage increase each year
1945
1951
1956


II
Changes in Wholesale Prices
1947/49=100
%
120
110
100
90
80
industrial
all commodities
farm products
1951
1952
1953
1954
1955
1956
1957


III
Wholesale Prices
1947/9 = 100
%
160
150
140
130
120
110
100
90
Iron & Steel
All industrial
Textiles
1951
1957*
Hourly Earnings
$
2·60
2·40
2·20
2·00
1·80
1·60
1·40
1·20
Steel
All manufacturing
Textiles
1951
1957*
* Average Jan-June

both individuals and companies rushed into the market to make long-postponed purchases. And in the classical inflationary manner—too many dollars chasing too few goods —prices were bid up.

If the Federal Reserve authorities had kept a tight rein on credit expansion—by making banking reserves relatively scarce and permitting interest rates to rise, instead of holding rates down by providing an abundant supply of money—they might have mitigated the inflationary effects of the scramble. For in its capacity to bid up prices, a dollar of credit goes just as far as a dollar of cash. But the controls available to the Federal Reserve authorities to keep a tight rein on credit had been abandoned during the war as a part of the process of borrowing the $157 billions used to finance the war effort of the United States. And, largely because it was feared that their use to make credit scarce would precipitate a general financial collapse, devastating to banks, insurance companies and other financial institutions with heavy investments in government bonds, these controls had not been put back in place and in working order at the end of the war. The decision to leave these controls dismantled was also influenced by the fear that using them to make credit scarce would greatly increase the cost of carrying the huge war debt.

This, very briefly, is what had happened to the machinery for credit control. To encourage the banks to buy bonds the Treasury persuaded the Federal Reserve authorities to provide what amounted to a guarantee that the bonds would not go below a fixed price or par—by making such purchases as might be necessary from time to time to hold them at par. The result was that by the end of the war the commercial banks in the Federal Reserve system, which do about 85 per cent. of the commercial banking of the country, were holding $90 billions of government bonds. If at that point the Federal Reserve authorities had been able to prevent the commercial banks from cashing in these bonds to get lending reserves, they might have curbed to some degree the inflationary surge caused by the rush of accumulated money into the markets. To follow such a course, however, would unquestionably have resulted in the price of government bonds, carrying a low fixed rate of interest, going below par and thus eventually have led to a much higher cost of carrying the total federal debt. It was also feared that tighter credit would not only put a brake on general business activity, at a time when some considerably trusted government forecasters were predicting that the

transition from a war- to peace-time economy would result in having about 8 millions unemployed, but probably pave the way for a general financial collapse.

As a result of calculations of this kind, the war-time policy was continued of having the Federal Reserve authorities make such purchases of government bonds as were required to maintain them at par; and in the process the Federal Reserve authorities continued to keep their member banks more than abundantly stocked with bank reserves. When they purchased government bonds—and between March, 1946, and June, 1948, they purchased no less than $9 billions to keep the price at par or above—they issued cheques payable from the funds of the Reserve banks. The proceeds of these cheques, in the nature of our Federal Reserve Banking system, constitute reserves for the expansion of credit by the member banks. Indeed, under the set-up prevailing, all the government bonds held in the community, whether by financial institutions or individuals, were potentially additional bank reserves.

The net effect of the governmental arrangements mentioned was to make credit both very abundant and very cheap at a time when the billions stacked up during the war were pouring into the markets of the country in a long-deferred rush for goods. The magnitude of this rush, built up by four years of war-time rationing, was so great that, regardless of the credit arrangements prevailing, it would unquestionably have resulted in a substantial increase in the general price-level. That was a more or less inevitable price of the war. But the inflationary surge was undoubtedly aggravated by having the machinery for credit restraint out of commission.

* * *

The machinery for effective monetary and credit control was still out of commission, in the way which has been outlined, when the rush for goods and services touched off by the outbreak of the Korean war in June, 1950, resulted in a second post-war surge of price inflation. For some time prior to the outbreak of this war, there had not seemed to be any particular urgency in making arrangements to cope with the dangers of price inflation. Indeed, in 1948 and 1949 there had been a substantial business recession, attended by a slight drop in the level of consumer and wholesale prices, a development that led to widespread conviction that the post-war buying rush had run its course, and that preventing deflation and recession

rather than containing price inflation might be the dominant problem henceforth.

However, the recession had run its course and prices were moving up again by mid-1950. Then, when the Korean war broke, memories of war-time rationing were fresh enough to start a stampede into the markets to get hold of things which, it was feared, might soon be rationed again. Coupled with the fact that people and companies were still well supplied with money, and that credit remained readily available at low cost, this resulted in an upward pressure on prices that pushed up both the consumer and wholesale price indices by about 10 per cent. within eighteen months.

There seems little doubt that the new surge of price inflation touched off by the Korean war was most influential in convincing the Federal Reserve authorities that the time had come to reassert their control over money and credit conditions. At any rate, in March, 1951, a so-called "accord" was reached between the Treasury Department and the Federal Reserve authorities, by which the latter no longer recognized an obligation to keep the price of government bonds pegged at par or above and by which, in effect, their full powers over the supply and price of money and credit, as initially granted, were restored.

The Federal Reserve authorities used their recovered powers over money and credit to temper the last phases of the surge of price inflation touched off by the outbreak of the Korean war. They also set to work to do what was necessary in their field to accommodate a steady but non-inflationary growth of the American economy. To this end they led off by abandoning the policy of pegging the market for government bonds. As had been predicted, government bond prices went below par, although only moderately so at first. Nevertheless, the Federal Reserve authorities were and have remained fully back in business, so far as full possession of their powers over money and credit are concerned.

By actively exercising their powers over the supply and price of money and credit, the Federal Reserve authorities made a key contribution to keeping the general level of prices notably stable through the year 1955. In doing so they had to cope with sharply contrasting trends in industrial and agricultural prices. From January, 1953, until December, 1955, the average of agricultural prices was going down—by 17 per cent.—while the average of industrial prices was inching up—by 6 per cent.

The rather ironic result of these cross currents was that the woes of the farmers, resulting from subsidized over-production and declining prices, constituted a boon of sorts to the industrial sector of the economy. They created a leeway which made it possible for costs and prices to be increased, without the average of consumer or wholesale prices being pushed up in such a way as to create what would readily be recognized as general price inflation. Chart II shows the nature of the offsets involved.

* * *

The business of placing responsibility for the increases in industrial prices which have continued since the subsidence of the Korean wave of inflation constitutes a battleground that is continuously fought over by labour leaders and business executives. The former argue that the rise in industrial prices is to be accounted for by greedy mark-ups on the part of business firms. In their turn, the business executives concede the making of the mark-ups, but insist that they were due primarily to increased labour costs. Unfortunately, the statistical reporting of the myriad of facts involved is inadequate, and from company to company and from industry to industry there are enough conflicting facts to keep the argument going so long as the combatants still have breath to give to it.

However, there is no room for doubt that in some industries the rise in wage rates under the wage agreements made in recent years far outstrips any possibility of achieving offsetting reductions in costs through an increase in labour productivity. The higher wage rates have thus led to cost increases which, if profit margins were to be maintained, could be matched only by increases in prices. A good example is the impact of wage settlements in the steel industry. According to a recent official study, output per man-hour in steel increased by about 14 per cent. between 1951 and 1955. Over the same four years, increases in hourly wage rates—and this does not include the added cost of "fringe benefits"—came to 26 per cent., or almost twice as much. Not surprisingly, the price of steel increased during this period by a little over 14 per cent.

There is no way to determine at all precisely the general extent of such cost-price increases, stemming from agreements to pay higher wages. In some cases they have not been contagious at all, because the industries in question were finding the going so heavy that they could not raise either wages or

prices without repelling customers already notably lacking in enthusiasm to purchase their products. This has been clearly true of the textile industry in several recent years. While workers in other industries were getting substantial wage increases, the textile unions shelved their demands for higher pay and in some cases voluntarily accepted wage cuts and shorter hours because of the slump in textile sales.

An attempt to determine how much of the inflation in recent years was due to the "cost-push" of wage increases was made by Dr. Emile Benoit, who is now Associate Professor in the Graduate School of Business Administration of Columbia University. Dr. Benoit pointed out that, between 1948 and 1955, unit labour costs (i.e. wage boosts not offset by higher productivity) actually lagged behind prices. Furthermore, almost half of the price inflation during this period took place in a single year, in which it was the excessive demands of the Korean war rather than higher labour costs that caused prices to shoot up. Using this evidence, it was Dr. Benoit's estimate that rising labour costs could not have been responsible for more than one per cent. a year—at the most—and he concluded that the rôle of unions is not so much to initiate price increases as to make the whole inflationary process practically irreversible. Dr. Benoit would be the first to concede that there is room for a handsome margin of error in his calculations. But, particularly in the absence of anything more convincing, they will serve as a rough approximation of the degree to which wage increases created cost-push inflation over the 1948–55 period.

* * *

It was not until 1956 that rising prices—particularly wholesale prices—brought inflation to the centre of the stage as a major national problem. This was due, in large part, to the fact that the agricultural price-level started to rise and thus ceased to offset and obscure the increase in industrial prices, as it had for several years. Also, in 1956, industrial prices were subjected to peculiarly strong upward pressure by a tremendous boom in new industrial plant and equipment. The volume of business investment in new producing facilities jumped about 22 per cent. above that in 1955, itself an all-time record total of $28·7 billions.

The very magnitude of the process of installing new producing equipment in 1956 seems to have contributed some-

thing to a state of industrial indigestion which resulted in a notably low rate of increase in industrial productivity during the year. So, also, did the incorporation in the working force of an abnormally large number of new workers, many of them unskilled, part-time workers attracted by the abundant supply of jobs of the sort they could conveniently handle. A total of about 600,000 had been estimated as the likely increase in the labour force for a year in the mid-fifties. But in the year between June, 1955, and June, 1956, jobs were taken by no less than 2,600,000 new workers, many of them inevitably of the relatively ineffective type indicated.

The general effect of the failure of industrial productivity to rise appreciably during 1956 was, of course, to make it extremely difficult to accommodate higher wages without higher prices. The situation was summed up in the President's Economic Report to Congress in January, 1957, as follows:

> While the increases in wage and salary rates were only slightly greater than those in 1955, the improvement in productivity appears to have been substantially less. Thus, wage and salary costs per unit of output, which had been stable during most of 1955, rose significantly last year.
>
> It would appear that the improvement in output per employee manhour which occurred in 1956 was not only less than the rise in 1955 but less than the average recorded for the post-war period. Total employment is estimated to have increased between 1955 and 1956 by about as much as the physical output of goods and services. Even after account is taken of changes in hours worked, only a very small gain in overall productivity is indicated. Interpreting these developments, however, it must be borne in mind that productivity improvements are irregular from year to year and vary from industry to industry. Nonetheless, the smallness of the 1956 gain contributed to the rise in unit labor costs and, in turn, to the increase in prices.

Using the powers restored to them by the "accord" of 1951, the Federal Reserve authorities tried to hold inflation in check, while at the same time trying to avoid putting a damper on sustained growth of the economy—a very delicate and difficult operation. To this end they raised discount rates twice in 1956 (following four such increases in 1955) and used their open market operations so as to limit the ability of the commercial banks to expand their loans and investments. The result of this "tight" money policy was that the increase in the over-all supply of money was held to little over one per cent. for the whole year. Simply stated, this meant that the Federal Reserve refused to feed inflationary pressures with more and more money and credit, as had been the practice in the two previous post-war waves of inflation. Taken by itself, this was

the single most important factor in holding the rise in consumer prices to about 3 per cent. in 1956.

* * *

In the nature of the American *political* economy, there are important limitations to what can be done through the general control over the supply of money and credit. If, for example, the Reserve authorities were to try so to restrict the total supply of money and credit that there would not be enough available to permit price increases prompted by wage increases, the pressure thus exerted would be almost bound to have some adverse effects on prices occupying essentially the rôle of innocent bystanders. Thus, so long as the Federal Reserve authorities cannot pin-point their measures so as to spare innocent bystanders, they are under special compulsion to apply monetary and credit restraints with great care. In the same way, the Federal Reserve can exert a credit and monetary squeeze tight enough to be plausibly charged with having contributed directly to unemployment only on pain of courting a prompt and violent reaction in Congress.

It may be, and indeed is, argued that the incidental suffering of the innocents attending the broad exercise of monetary and credit controls is a cost we must pay if prices are to play their key rôle in allocating resources effectively within the limits imposed by a generally stable price-level. If, however, the innocents are also politically powerful, as they well may be, their complaints will be heard and influential in political circles from which, in the last analysis, the Federal Reserve cannot be completely detached.

Through the exercise of their broad powers over money and credit, however, the Federal Reserve authorities can both temper inflationary forces and do much to establish the general economic climate in which these forces have a tendency to expand or wither. As far as a "cost-push" inflation is concerned, the Federal Reserve can use its powers to make it difficult for companies to pass on wage boosts in higher prices with the freedom they enjoyed in the immediate post-war years, when the economy was already pumped full of much excess purchasing power. In other words, by putting on the lid, the Federal Reserve can create pressure for rising costs to be absorbed somewhere along the line—and so prevent such creeping inflation as does occur from gathering momentum and spiralling into a runaway inflation.

Similarly—and this is the other side of the same coin—the Federal Reserve authorities can cut down on new credit which would be used to bid up the price of scarce goods and materials. In 1955 and 1956, steel and most types of producer equipment were, with the pronounced boom in capital expenditure, in relatively short supply. Naturally enough, the most rapid rise in prices (about 13 per cent. in a year and a half) was concentrated in this sector of the economy.

This brings us to the main question. Is restraint of this kind enough to prevent wage-cost-price inflation from riding for a disastrous fall? The answer is clearly "no" and made so quite explicitly by the opening section of the President's Economic Report this year, which stated:

> The full burden of avoiding price inflation, which is an ever present hazard in an expanding economy operating close to capacity, cannot be successfully carried by fiscal and monetary restraints alone. To place this burden on them would invite the risk of producing effects on the structure and functioning of our economy which might, in the years ahead, impair the vitality of competitive enterprise.

Fortunately, this very cautiously worded warning is not the end of the story. As has been indicated, the rapid rise of the general price-level in 1956 was the result of an unusual combination of circumstances which is not likely to be repeated, at least in that form and in the same degree. This combination included the reversal of a downward course of farm prices which had offset rising industrial prices in the general average, a slowing up in the improvement of industrial productivity that put upward pressure on industrial costs and prices, and an enormous boom in business investment in new producing facilities with a further buoyant influence on industrial prices. Two results of this surge of business investment in 1956 are clearly to be expected, and both of them will have a retarding effect on wage-cost-price inflation. As the heavy installation of new equipment gets shaken down, it will increase industrial efficiency greatly and thus provide the potential, at least, for a resumption of a rapid increase in the productivity of labour. Further, the investment made in 1956 gives industry a long lift toward being amply equipped with producing capacity. Since the root cause of price inflation is relative scarcity of goods this constitutes a major drag on price inflation.

President Eisenhower has eloquently called for restraint on the part of both unions and employers in raising prices, either through cost-increasing agreements on wages or the marking-up of prices for other unjustified reasons. It is always

possible to hope that careful heed will be given to this request, but the record of "jaw-bone control" of either wages or prices, as it has been vulgarly characterized, is not one of notable success. However, there are powerful new forces at work and in prospect which hold promise of exercising a restraining influence on the future course of "cost-push" inflation. In summary form, they include:

1. The resumption of rapid increase in the productivity of industrial labour.
2. The attainment of ample capacity in almost all lines of industrial production.
3. The creation of confidence that the Federal Reserve authorities have considerable powers to temper inflation, and have the disposition and political independence to exercise them, if necessary.
4. Increasing intensity of competition in almost all lines of American business.

There is no doubt that unions in a number of key manufacturing and service industries have been equipped with monopoly powers which they can use to exact wage increases that raise costs and hence, if the employers are to remain solvent, prices. There is also no doubt that there are some employers who, in the process of meeting the increased wage costs by increasing prices, have a ready disposition to add a little something extra for good measure to such price increases when they are confident they can get it.

Under especially propitious circumstances, like those prevailing in the spring of 1955, powerful unions may be able to exact wage increases so large that—even with the best monetary policy—prices are sure to go up in the industries concerned. In 1955, the United Auto Workers obtained a wage increase of more than 20c. per hour, thus setting the pattern for similar agreements in other basic industries. This was such a complete "break-through" of the established wage pattern as to put almost irresistible pressure on the industrial price structure. In most years, however, the capacity of the unions to put such strong pressure on wage rates is sharply limited by the increasing number of long-term wage agreements (of 3 to 5 years) and by the fact that union workers constitute only about 40 per cent. of all industrial workers and 25 per cent. of the total labour force. Thus the effect of a "break-through" by any one union is reduced in terms of the whole economy.

Also, it is perfectly possible for a price increase to backfire in the form of lower sales and unemployment, rather than to

have greater exactions comfortably imposed upon the consumer. And for reasons which have already been indicated, there is good reason to believe that we are moving into a period when this possibility will have a tempering effect on demands for wage increases that are bound to push up costs and prices because they are clearly in excess of any prospective increase in productivity.

This is by no means equivalent to a conclusion that "cost-push" inflation is a thing of the past. On the contrary, when the monopoly power of unions in key industries is coupled with a governmental commitment to maintain full employment, forces which exert a powerful upward thrust on wage costs are clearly unleashed. Indeed, it is the contention of many economists, particularly in the United Kingdom, where the problem is so acute, that a full employment policy is largely an inflationary concoction. As early as 1951, a correspondent of *The Economist* put it quite bluntly by concluding: "Inflation is nine-tenths of any practical full employment policy."

Even so, that is not the same thing as saying that the slow-burning cost-inflation which has been built into our full employment economy cannot be kept under tolerably good control. The simple fact is that nowhere in economic history has there been a case of runaway inflation when an eye is kept on such fundamentals as control over the money supply and a reasonably balanced budget. Rather, there is good reason to believe that the alarming spurt of price inflation in 1956 will be seen in proper retrospect to have been the result of an unusual combination of circumstances—an amalgam of many inflationary pressures—which could not be held completely in check by monetary and credit restraints. There are grounds for believing that this will not be a recurrent state of affairs in the United States in the next decade.

Dexter M. Keezer.
E. Russell Eggers.

New York.
August, 1957.

Science and Industry

By Thomas Wilson

THERE is a widespread suspicion that Britain fails to make satisfactory practical use of her achievements in science. The explanations sometimes given are the conservatism of businessmen, their philistine neglect of science, the prevalence of monopolistic restraints, some lack of practical capacity in the nation at large and a failure so to guide scientific research as to serve practical purposes. What is the truth in such allegations?

In 1954 the Manchester Joint Research Council published a valuable pioneering survey of the relationship between industry and science. Two years previously, the British Association had decided to appoint a Science and Industry Committee consisting of scientists, businessmen and economists who were invited "to study the problems of speeding up in industry the application of the results of scientific research". The Royal Society of Arts and the Nuffield Foundation subsequently joined in this enterprise and a preliminary report written by the Committee's directors of research, Professors C. F. Carter and B. R. Williams, was published in May of this year.[1] The authors, aided by a team of research assistants, made a detailed study of the available literature and added to this the results of 152 detailed case studies and numerous interviews with experts in government departments, research associations and universities. Their report thus consists of a reasonably comprehensive, if preliminary, survey of this vast subject, and may be followed by a further document which will contain more definite recommendations for policy.

Apart from co-operative enterprises of this kind, there has been a growing volume of publications on various aspects of innovation, and it may not be too much to hope for promising developments in industrial economics. If a better understanding of the trade cycle was the main achievement of the

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[1] *Industry and Technical Progress* (Oxford University Press, 25/-). As the authors explain, the Science and Industry Committee "deputed the writing of this book to us as its Directors of Research, leaving to us the detailed responsibility, and regarding its own function as being to endorse the whole as worthy of publication."

The author of the present article, a Fellow of University College, Oxford, was a member of the Science and Industry Committee from its inception. The views expressed herein, which are purely personal, also reflect some of the conclusions of a private investigation of the electronics industry.

inter-war period, the theory of Imperfect Competition, based on strange static assumptions, was its outstanding failure. Perhaps a more hopeful approach to the study of industry is now about to be adopted.

THE ORIGIN OF NEW IDEAS

Traditionally, the origin of new ideas is the solitary inventive genius struggling for recognition in a hostile and sceptical world. A related belief is that invention is unpredictable and uncontrollable—a belief reflected in the tendency to describe inventions as "autonomous" in theories of the trade cycle. These views still contain an important element of truth, but the coming of organized industrial research has brought large and familiar changes. Inventions now tend to be based on a foundation of applied science which offers more scope for team work. Moreover, the cost of research is high: it takes £3,000–£5,000 a year for a scientist with the necessary assistants and materials—and it would cost more if the salaries of scientists were allowed to reflect their scarcity. Even a modest research department may be too costly for a small firm, which will have to depend on research from outside. A further change is the extent to which the flow of inventions can be controlled by varying the effort devoted to research and development; if the scope for investment is so large today as to make the old Keynesian prophecy of stagnation appear singularly out of place, the explanation is partly the more widespread attempt to apply science to industry.

Such considerations should not be allowed to obscure the continuing importance of the small unit. In his famous thesis on Countervailing Power, Professor Galbraith observes: "A benign Providence . . . has made the modern industry of a few large firms an almost perfect instrument for inducing technical change."[1] Unfortunately, such statements obscure how much is still owed to individual and eccentric effort.

It may be helpful in this connection to distinguish between those innovations that represent advance along existing lines and those that imply a bold new departure. Innovations of the first kind, which may be very important in their total effect, may be capable of achievement by routine effort. Those of the second kind may also require much labour and patience; but if a new and improbable invention is to be carried through to success, imagination and even fanaticism are necessary. The man who possesses such qualities may fail to carry more

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[1] *American Capitalism*, page 91.

conventional colleagues with him. He may not, it is true, be prevented from following his bent even if he works in a large organization; indeed, one of the critical tests of the efficiency of such units is their skill in spotting rare ability and giving its possessor sufficient independence of action. But personality may make him unfit for work in a large team or special circumstances may exclude him from it. He may work alone, or almost so, and may finance himself from new risk capital rather than turnover.

Some of the leading new industries arose from a foundation of scientific knowledge in a way that the older industries did not. Even when there is such a foundation, advance may be empirical, and practical achievements may outstrip theory or contradict it. Examples can be found readily enough in the history of the electronics industry. It is most improbable that a jury of scientists would have said that Marconi's first transatlantic experiment was likely to succeed. As late as 1922, the Marconi-Franklin short-wave transmissions were made in the face of scientific scepticism, before the theory of the ionosphere had been developed; it had been the amateurs, relegated to the supposedly useless short waves, who had pointed the way before the academic scientists.

The jet engine was a remarkable triumph of the minority view. If someone had asked in the 'thirties where the next big aeronautical development would originate, the most plausible answer would have been in the research department of one of the existing and well-experienced firms, or else in one of the Air Ministry's own establishments. A suggestion that it might come from an unknown individual without organized facilities who would have to build up his little research unit from scratch, might have been regarded as evidence of a nostalgic bias in favour of the kind of inventor whose day was definitely past. In the event, the jet turbine was created by a junior officer in the R.A.F. whose faith and determination remained unshaken in face of scepticism on the part of technologists, officials and businessmen. His account of his struggles, *Jet*, should be compulsory reading for any executive of a big firm who is heard to observe that innovation is now a matter for the large research unit alone.[1]

To say this is not to belittle the achievements of highly organized research, of which nuclear power and the nuclear

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[1] An investigation of the origin of some of the principal modern innovations was recently carried out at Chicago and Oxford and the results are presented in ***The Sources of Invention*** by Professor John Jewkes, to be published by Macmillan & Co. in the spring of 1958.

bomb are, perhaps, the most obvious. There should not, after all, be any need to come down unequivocally in favour of big organizations or little. The practical moral—and it is an important one—is that the field must be left as open as possible for all comers. If the small unit, even with inventive genius behind it, finds survival difficult and expansion almost impossible because taxation bears so heavily upon it, social loss will follow. It is unrealistic to say that its function will be performed just as well and as quickly by some official department or by some big firm with better access to the capital market.

Similar considerations apply in regard to fundamental scientific research. Once more, the need for team work must be conceded, and so must the case for planning research in order to prevent duplication of the kind that could occur only through ignorance, and to ensure that gaps of indisputable significance are filled as well as may be. Again, however, there are limits beyond which orderliness must not be carried, because liberty is not only an end in itself but a condition favourable to technological progress. Fortunately, it is uncommon nowadays to hear the proposition, so popular with Marxian scientists before the war, that research should be socially directed in order to serve social objectives. As Carter and Williams record, some of the most important innovations have flowed from research that began with no such clear objective and would probably have been inhibited or prevented if a test of "social desirability" had been initially imposed. Clerk Maxwell was not aiming at radio when he worked out the theories that became its foundation. Professor Kipping did not anticipate the uses to which his silicones could be put, and Rutherford himself could foresee no practical application for his work on the atom.

THE SUPPRESSION OF INVENTIONS

Invention is necessarily wasteful. When everything feasible has been done to plan research coherently, the uncertainty of the outcome, even of the less revolutionary inventions, is bound to mean much failure and disappointment. Thus Carter and Williams report that: "It is not possible to get useful statistics for the proportion of good ideas that are rejected after applied research—in industrial laboratories that we have visited it varies between 50 and 90 per cent.—but certainly the proportion is high." Even the ideas that pass this technical test may fail to pass the economic test and may very properly be rejected at this stage. The heavy rate of casualties may help

to account for the view that inventions are often suppressed or neglected. Disappointed men can often find ready listeners, even if they cannot find ready backers, and the rejection of their proposals can easily be represented as stupid or wanton. Where so much is uncertain, mistakes may indeed be made, and the embittered inventor may be vindicated in time. It is a different matter to suggest that many hopeful new lines which any competent jury of technologists would support, are needlessly lost to the world.

It is sometimes said that innovation is held back because a high prospective rate of return is required in this country. "What evidence we have", observe Carter and Williams, "indicates that British producers do not set a higher standard of prospective yield than the Americans." It may, however, be that British businessmen can go to greater lengths to preserve existing capital values because monopolistic restrictions are more common here than across the Atlantic. Indeed, monopoly is widely believed to lead to the suppression of many promising inventions in both countries. Unexhaustive—and unexhausting—references to empirical evidence can give an air of realism to social and political theories that may have a different origin, and vast superstructures have been erected on such dubious foundations as the story of the "everlasting match".

The dull conclusion must, however, be recorded that the more sensational charges do not seem to stand up well to serious investigation. Why should a monopolist wish to suppress an invention, however relentless his pursuit of self-interest? The answer is perhaps less obvious *a priori* than might be supposed. He may, it is true, have serviceable equipment which he is loth to scrap immediately, but it might not be in the public interest any more than in his own to do so. The ordinary rule is that the total annual cost of producing a given output by the new method must fall below the running cost on the old before replacement can be justified. This, admittedly, is a simplified case and a more extended analysis would reveal others where innovation might be delayed. In particular, a distinction should be made between a monopolist's attitude to a new process suitable for his own works and a threat to his market from a radical development in another trade which he does not wish to enter. But only very tentatively, on the basis of such general reasoning, can the presumption be established that much harm will in fact be done.

Nor does a more empirical approach lead much further. Carter and Williams state that they have examined all the

reports of the Monopolies Commission in order to see:

> if an effect, one way or the other, on technical progress can be established. We obtain from this study an impression that the strength and importance of restrictive agreements—at least those so far investigated by the Monopolies Commission—can be greatly exaggerated. Elaborate machinery may exist (as, for instance, in the London Builders' Conference) and yet have hardly any apparent effect. A second conclusion is that there is no striking evidence of a deliberate suppression of new knowledge.

The public attention given to the activities of the British Valve Makers Association may be mentioned as an example of the way in which the importance of restrictive agreements may be exaggerated: while the price-fixing of valves sold for replacement may legitimately be criticized, only a modest fraction of output was in any case affected.

Although inventions may not be completely suppressed, their use may extend more slowly if monopolistic restrictions—or government controls—tend to fix the pattern of an industry and prevent the expansion of efficient firms that will make good use of science. It may also be true that a firm which enjoys a secure monopolistic position, or a group of firms well-sheltered by their powerful trade association, may be unprogressive because they lack the sting of competition. On the other hand—and there always appears to be "another hand" in this field of inquiry—it can be held, with Schumpeter, that innovation is more likely if there is a prospect of some temporary monopolistic security in the enjoyment of its fruits.

The need to reconcile these conflicting considerations is recognized in the law relating to patents: the inventor is given a conditional monopoly both as a reward and as a way of allowing him to cover his costs, but there are careful provisions against suppression. To quote Mr. G. A. Bloxham,

> the weapons in the armoury of the public to prevent misuse of the patent monopoly are by no means negligible. They comprise compulsory licensing and, in the last resort, revocation of the patent on the one hand, and the voiding of restrictive licensing terms coupled with a sanction which may render the patent nugatory against third parties on the other... A patent is wholly unsuited to the purpose of suppressing an invention.[1]

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[1] *Journal of Industrial Economics*, July 1957. The author also points out that: "Patent specifications constitute an important part of the technical literature and in many arts they constitute the main body of up-to-date information available."

Carter and Williams observe that delays in the granting of patents by an understaffed Patent Office may leave all concerned in a state of uncertainty for two or three years and they propose that the Office should be strengthened. They believe that a high proportion of patents are allowed to lapse after four years, when renewal fees are payable; it may be, however, that these are, in the main, the less successful patents.

The general tendency has been to exonerate patents from blame since the Swann Committee failed just after the war to elicit any evidence of the suppression of ideas by this means.

It is unlikely that all the activities of trade associations can be equally exonerated; but economists, for their part, may have been too inclined to assume, without evidence, that such bodies are always run in the interests of their least efficient members, as though there were no competitive pressures *within* a cartel. The regrettable theory of Imperfect Competition has also fostered the view that competition requires many producers; but competition may be very keen between a handful of firms where each knows his rivals and feels their blows. Indeed, it is in some of the industries of many producers that the adoption of new ideas has been notably slow and uneven. A progressive farmer may become rich and others may decide to emulate him; but his success will not threaten them directly if they fail to respond, in the way in which a big advance by one car firm will threaten the others.

If it is true that monopolistic restrictions do less harm than might be expected, the explanation may be, not that cartels are harmless, but that they are often insecure, challenged by possible rivals without and weakened by dissensions within. Much greater rigidity may follow from official controls which allocate supplies to producers by some rough formula such as consumption in a base year. If there is, as I believe, a presumption that private restrictive agreements are harmful, there is a still stronger presumption against such official restrictions enforced by law.

QUICK TO INVENT, SLOW TO EXPLOIT?

A nation that feels itself to be losing ground industrially may derive comfort from the reflection that its more successful neighbours are only applying what were originally its own ideas. For many years, British people have told themselves that they are quick to invent but slow to use their inventions. The French apparently say the same thing of themselves and so, no doubt, do others. The belief is comforting, because if the ideas come originally from us it may be possible to remove some of the obstacles to our using them and thus restore our leadership. Moreover, there may be a certain snobbish satisfaction in feeling that we are the people who make the really basic contributions, even if the Americans, with their more *bourgeois* outlook, are better at turning them to practical purposes.

The Science and Industry Committee felt that the evidence for such bold assertions needed to be collected—and ought, indeed, to be readily available if the confidence with which they were made could be justified. The Report records that enquiries were directed to "a large number of University scientists, asking for examples of new ideas which were or are being neglected by British industry but developed abroad . . . Our informants, however, were unable to give any general evidence" sufficient to support the usual complaints. Moreover, they "knew of no obviously bright ideas lying about *wholly* neglected by industry." The conclusion is carefully worded and does not exclude a slowness in the *general* adoption of ideas. But it lacks the piquancy of scandal, and can be regarded as disappointing or reassuring according to one's point of view.

Britain's failure to create a dyestuffs industry in the years before the first world war is the standard example of slowness to exploit. A more recent example may be the slow pace at which computors are being adopted in this country, where so much of the basic work was done. But examples may be found on the other side, of which television is one: although the U.S.A. tended to be in the lead in devising a television camera, it was Britain that had the first fully electronic television service in the world. Where the evidence seems to point the other way, there are sometimes special reasons, as illustrated in *Industry and Technical Progress*. In others—e.g. that of the transistor—our weakness has been partly a lack of *fundamental* research. Of course Britain could make better use of science in industry, as could other countries; it does not follow that we are handicapped by an academic bias that is peculiar and exaggerated.

The conclusion appears rather to be that we flatter our inventive ability and disparage our practical sense when we claim that we are usually quick to invent and slow to exploit. Alexander Woolcott once described himself as on old dreamer with a fine sense for double-entry. Perhaps the British resemble the sage more than they suppose.

CONDITIONS FAVOURABLE TO PROGRESS

The discussion so far has given no support to the view that vast improvements could be quickly achieved by ensuring that the results of scientific enquiry were not suppressed by interested parties, or by simply placing more emphasis on applied research at the expense of fundamental enquiries. The real task is more difficult than such easy prescriptions imply and its accomplishment can only be gradual.

What are the conditions favourable to the general adoption

of new ideas? Efficiency, in the broader sense, need not imply originality. Indeed, most firms must clearly depend in the main on outside ideas. Hence the importance of the arrangements for transmitting the results of invention by patent specifications, the technical press, the advice of public or private research institutions, the efforts of salesmen and so on. Whether a firm will make use of such facilities and respond to the new ideas put before it depends upon the quality of the management. Carter and Williams mention no less than twenty-four desirable characteristics—a formidable list that could perhaps be made more manageable by distinguishing those qualities that can be fostered by outside effort from those that reflect inherent differences in people. Firms whose work has scientific origin (e.g. electronics) may be more likely to be attentive to developments outside than those that practice a traditional craft. Even if a firm employs scientists it may treat them as back-room boys who may be called upon to solve difficulties that crop up in production and, when not so needed, may be free to amuse themselves with long-term projects. Elsewhere, a firm's entire activities may be integrally bound up with scientific change, and scientists and technologists will be employed not only in the back-room but on production and sales.

After a general survey of the advantages and disadvantages of size, and a reference to the case studies, the Report concludes:

> There is no general and systematic connection between the size of firms or form of industrial organisation and the *possibility* of technical progressiveness. . . . Apart from noting the special handicap of family firms, we do not find it possible to assert that the *possibility* of technical progressiveness is translated into reality more in one type of firm than another.

Nor did a special enquiry carried out by the Board of Trade for the Science and Industry Committee reveal much correlation in 1951 between the size of firms and capital expenditure per employee—a somewhat unexpected verdict. These are admittedly negative results but they are of some interest in view of the prevalent belief that large firms are generally so much more progressive and so much more capitalistic.

A small firm may be able to ease some of its difficulties by sub-contracting: some huge but sceptical concerns were employed in this capacity by the tiny but hopeful Power Jets, Ltd., and the practice is a common one. But it is not only the small firms that must rely for vital assistance on others, and the big ones themselves may be held up for lack of an essential

complementary product. In all industries there are inefficient firms, but some have more than their share and so constitute the weak links that retard innovation elsewhere. Thus, some electronics firms have devised ways of controlling machine tools by computors, but the machine tool industry may prove a slow and cautious partner.

In such cases, imports sometimes provide the best answer, and it behoves the government to take care that its protective policy does not exclude the remedy for a weak link. Vertical integration or the enticement of a newcomer may be alternative solutions, but the reform of the inefficient firms themselves may present more serious difficulties. Public ownership offers no easy remedy, as can be seen from the way in which the industries now nationalized continue to reflect their old characteristics—keenness in the case of Electricity, sluggishness in the case of the Railways, and so on. Moreover, public corporations dislike competition and usually succeed in eliminating it from their own immediate industry. If security then breeds slackness, or public accountability discourages the taking of risks, it will not be easy to remedy the error and restore private enterprise without becoming involved in political controversy.

THE NEED FOR SAVINGS

There has been a marked increase in the expenditure on research and development since the war. Evidence is incomplete but it seems that—after allowing for price changes—expenditure by research associations is about three times as high as before the war; expenditure by the Department of Scientific and Industrial Research is about four times as high, while expenditure by private firms has more than doubled. The total sum spent in 1955 has been put, with a large margin of error, at £325 millions, or 2 per cent. of the gross domestic product. Of this total, over two-thirds was spent on direct government work or government contracts; about two-thirds was for defence, although civilian needs may have benefited indirectly.

Both the increase in research and development and the exploitation of its results require large numbers of scientists and technologists, and a firm, however progressive, may be grieviously handicapped by a national shortage of such specialists. This large and complicated topic, which is currently receiving so much attention, will not be discussed here and attention will rather be directed to the shortage of savings.

Businessmen are very ready to complain that taxation hampers their efforts but strangely loth to admit that they have ever lacked the funds for expansion. It may be that pride prevents them—especially, perhaps, if their businesses are small—from admitting that their credit has been insufficient for their needs, whereas abuse of the tax collector is felt to be very proper and no sign of weakness. If I am right in supposing that the businessmen's attitude is biased in this way, great caution must be exercised in interpreting the results of sample investigations, such as that made at Oxford before the war and more recently for the Science and Industry Committee, which seem to suggest that most firms have adequate finance.

There are other reasons for caution. Firms prefer to finance expansion from their own resources and resent taxation which reduces the scope for doing so. (The extent to which they have sought to escape this pressure by the severe restriction of dividends is recorded by Carter and Williams: dividends have fallen from about 60 per cent. of company income in 1938 to about 25 per cent. today—a fact which the T.U.C. would do well to ponder.) When firms are, however, forced to seek outside finance they may be able to get what they want easily enough, and at an annual cost which is not too discouraging, provided they are prepared to accept the other disadvantages of increased indebtedness or larger share capital. If funds can thus be found, this is because the shortage of savings has not been adequately translated into a shortage of finance.

In such circumstances, the apparent evidence can be misleading. For example, Carter and Williams observe that:

> ... an unwillingness to lend in the form of risk capital might be expected to show itself in a difficulty in raising ordinary share capital except at high expected yields, and in an increase in the spread of yields between safe and risky investments. There is no evidence whatever of any such general change.

One explanation is surely the desire to escape from fixed-interest securities when prices are expected to rise; the fear of inflation has tended to offset the effect of taxation on the rewards for bearing the risks of commercial failure.

Bank deposits have not, it is true, increased much since 1948, but there has been a considerable increase in their velocity of circulation as idle balances that were the heritage of suppressed inflation and ultra-cheap money have moved through the financial system and become active. Inflation has meant that the shortage of savings has made itself felt as a shortage of manpower and other resources, rather than of finance. Cash and deposits as a percentage of national income

are now at a record low, and if deposits are even held constant for some time, the shortage of finance will begin to reflect more accurately the pressure on savings. The popular dogma that the rate of interest does not matter may then begin to appear somewhat foolish.

Against a background of inflation, it is not easy to assess the general efficiency of the capital market or its adequacy as a source of finance for small firms that seek to exploit the achievements of science. What statistics are available do not suggest that the funds at the disposal of the I.C.F.C. and all the other finance companies would suffice for more than a very modest fraction of industrial investment. If the demands upon such bodies have not so far greatly over-taxed their powers, the explanation must be sought mainly in inflation. In any event, outside funds will never be a full substitute for the internal finance of which firms have been deprived by the tax collector. Here, then, is an example of the old conflict between social objectives: a wider and more enterprising application of Science to Industry, on the one hand, and our present highly progressive tax structure, on the other. To choose the latter may not be thought foolish. What is important is to realize that at some point a choice must be made.

Thomas Wilson.

University College,
Oxford.
September, 1957.

Publications Received

GRADUATES IN INDUSTRY

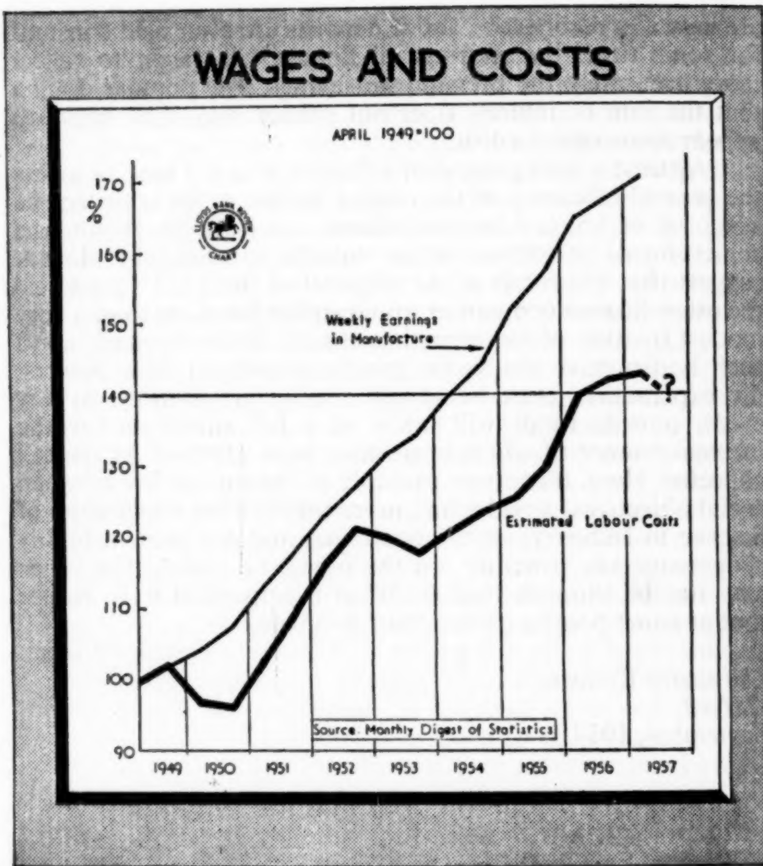
Political and Economic Planning (Allen and Unwin, 30/-)

In recent years industry has become the largest single employer of graduates, the new relationship that this involves with the universities presenting a number of major questions, some to do with education, others with the best use of scarce manpower. In this book, P.E.P. surveys the policy and practice of industry as a whole, the enquiry being based on interviews with industrial firms recruiting graduates and with graduates who had gone into industry.

THE ECONOMICS OF UNDER-DEVELOPED COUNTRIES

By P. T. Bauer and B. S. Yamey (Nisbet, Cambridge University Press, 10/6)

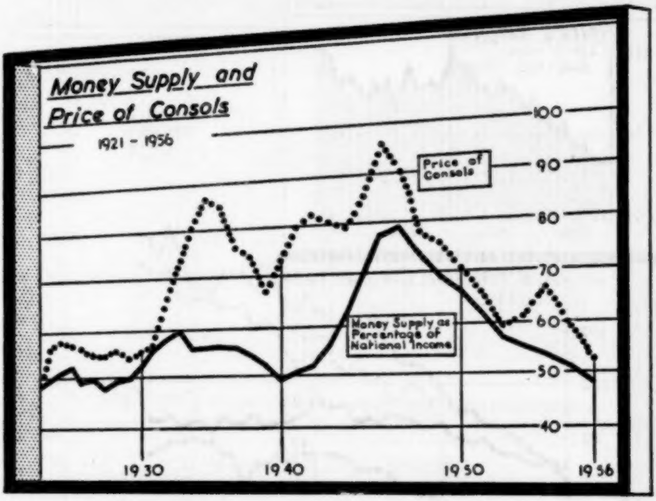
About three-quarters of the world's population live in what are commonly known as the under-developed countries; their problems and prospects are not merely local issues but are of concern on an international plane. This book—one of the latest in the series of Cambridge Economic Handbooks—brings economic analysis to bear on many aspects of the economic life of these countries and analyses some major issues of policy.

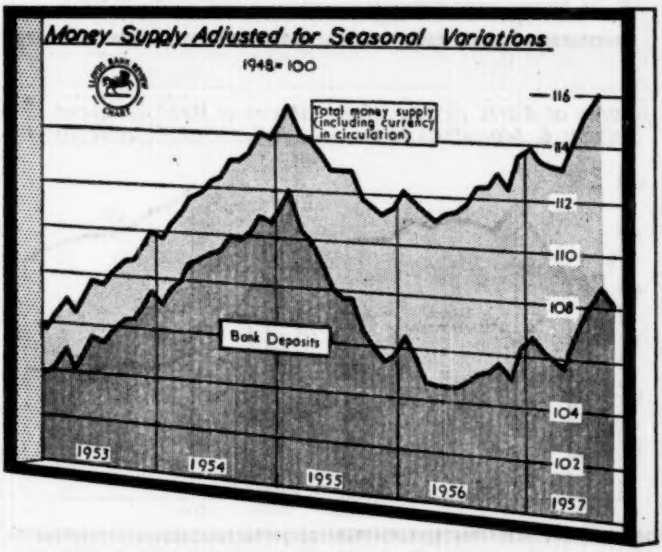


The upper line in the chart shows the trend of weekly earnings of all wage-earners in manufacturing industries in April and October each year, as published by the Ministry of Labour. The index of labour costs is arrived at by taking into account also changes in the numbers employed in these industries and in the volume of manufacturing output.

It will be seen that, whereas weekly earnings have been rising continuously, there have been periods, as in 1949/50, when the larger pay packets have been more than outweighed by an increase in production, to produce a fall in labour costs per unit of output. Thus, the steep rise in labour costs from October, 1950, to October, 1952—an increase of as much as 26 per cent. in two years—was followed by a slight reduction in the following twelve months. The upward trend was resumed with a rise of 10 per cent. over the two years to October, 1955, and then accelerated sharply: in the six months to April, 1956, the increase was at a record annual rate of 15 per cent. Contrary to a widespread impression the upward movement then slackened considerably, the further increase over the twelve months to April, 1957, being only 2½ per cent. With manufacturing output rising again, the indications are that labour costs may actually have been falling in the current half-year from April to October, 1957.

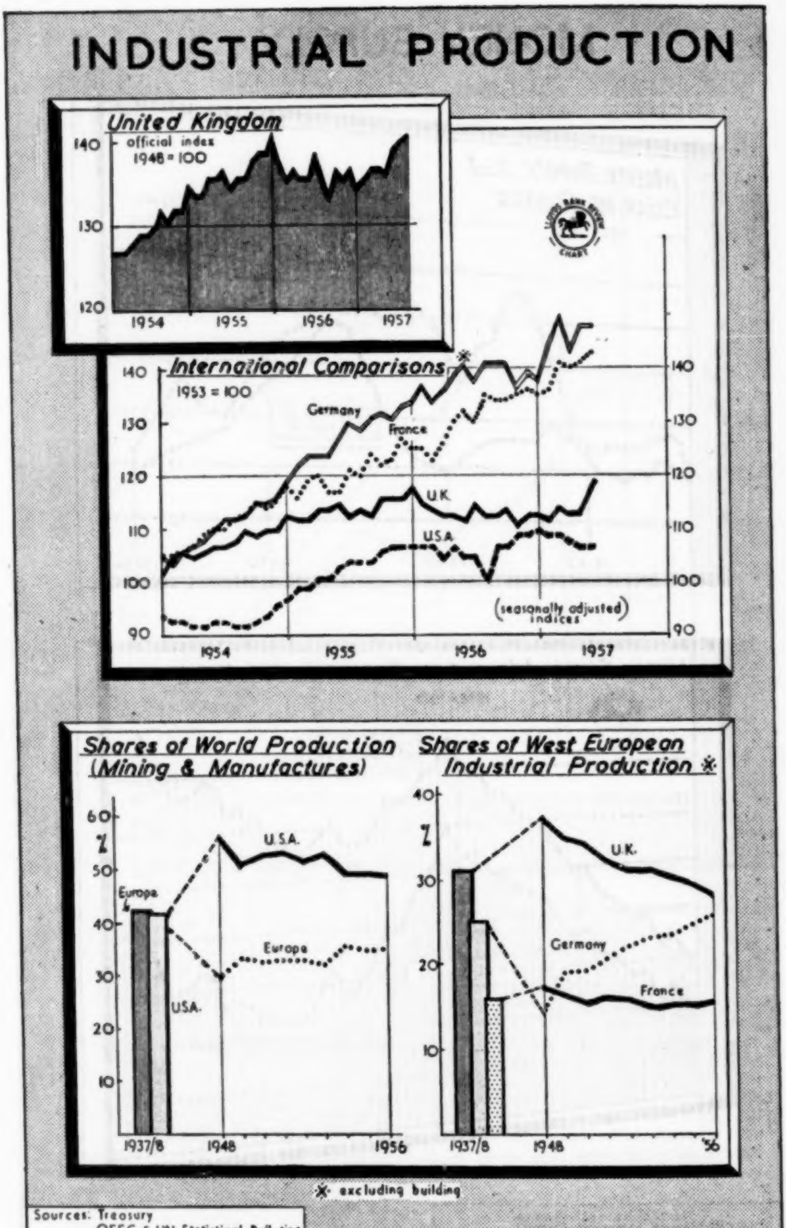
MONEY SUPPLY



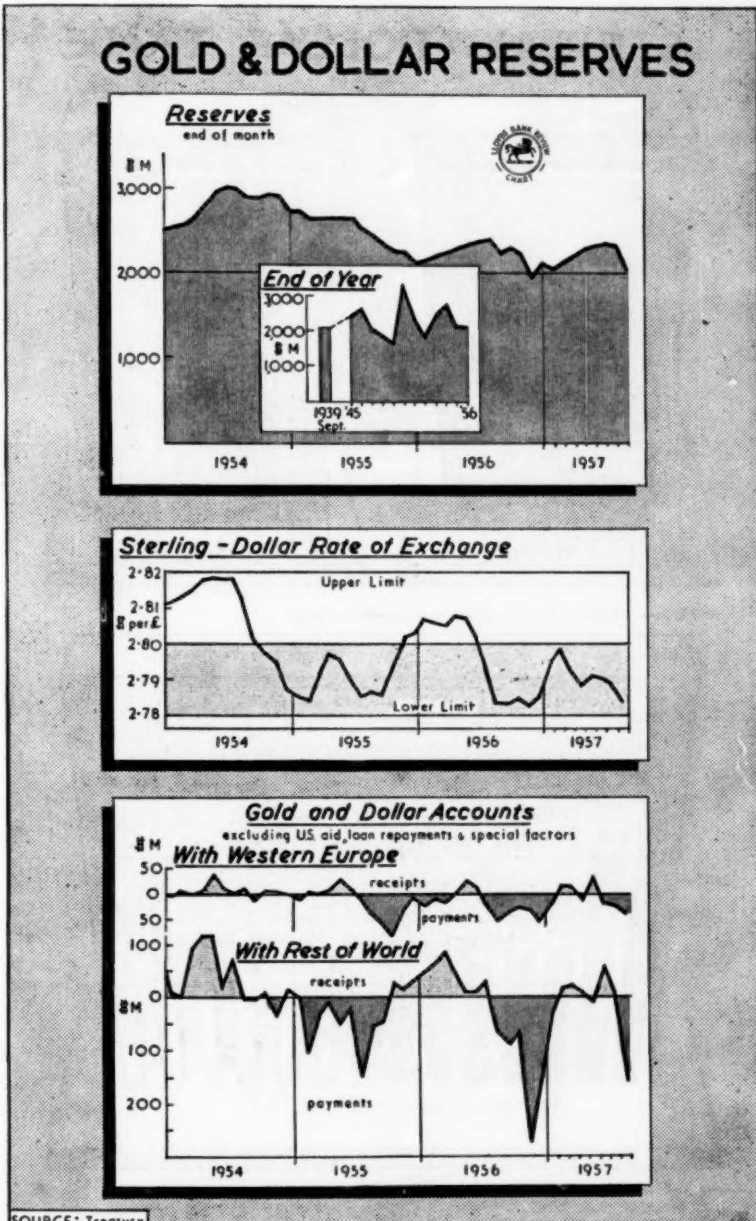


SOURCES : National Income publications
Annual Statistical Abstract
Committee of London Clearing Bankers

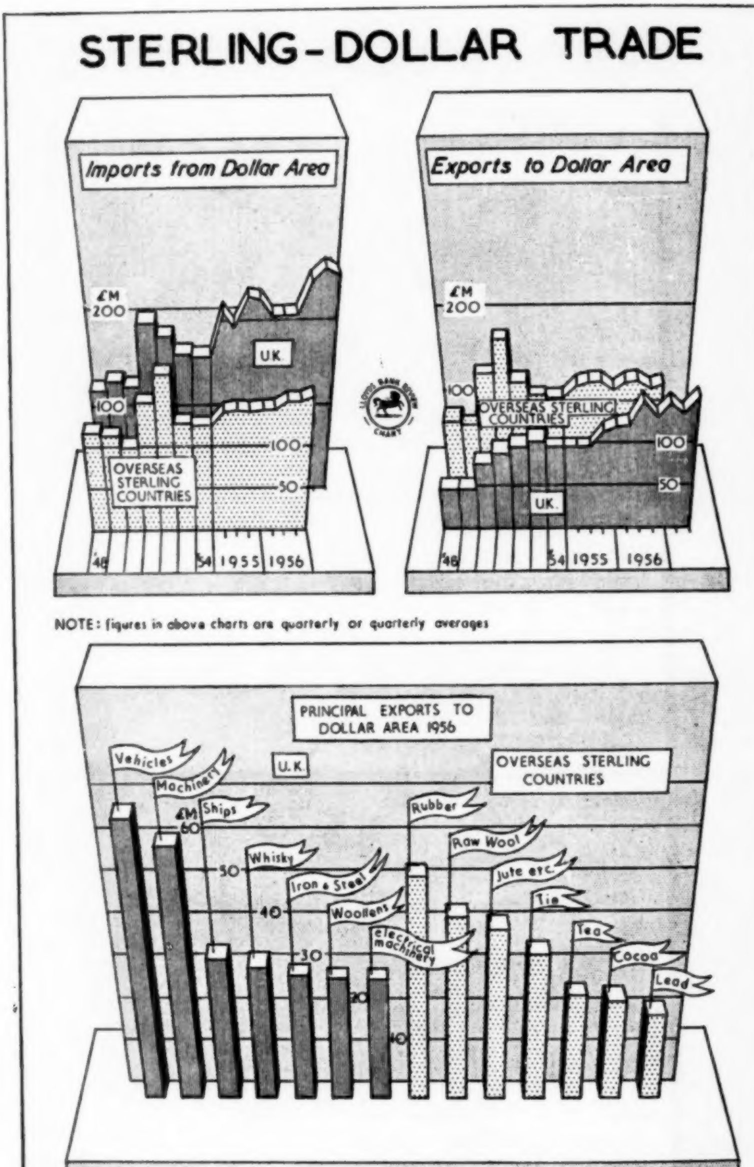
In announcing his new measures on Sept. 19, the Chancellor said there can be no remedy for inflation which is not founded upon a control of the money supply. In 1956 the money supply was lower in relation to national income than at any time since 1927 but bank deposits have been rising again for twelve months past.



U.K. industrial production has started to rise again, after its virtual stability since 1955. In the U.S.A., by contrast, production appears to have reached a temporary peak at the end of 1956.



The above charts show the sharp blow our external position sustained during August. By the end of the month our gold and dollar reserves had been reduced by $225m.



Exports to the dollar area by the U.K. last year exceeded those of all other sterling area countries together. Although our dollar imports also increased slightly, the adverse balance of trade was reduced by nearly a third.

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